Testing Laboratory 3787

# RADIO TEST REPORT

| | |
|---|---|
| FCC ID | : TLZ-XM455 |
| Equipment | : IEEE 802.11 2X2 WiFi 6 MIMO Wireless LAN + Bluetooth 5.3 Combo LGA Module |
| Brand Name | : AzureWave |
| Model Name | : AW-XM455 |
| Applicant | : AzureWave Technologies, Inc.<br>8F., No.94, Baozhong Rd. , Xindian Dist., New Taipei City , Taiwan 231 |
| Manufacturer | : AzureWave Technologies, Inc.<br>8F., No.94, Baozhong Rd. , Xindian Dist., New Taipei City , Taiwan 231 |
| Standard | : 47 CFR FCC Part 15.247 |

The product was received on Oct. 24, 2022, and testing was started from Nov. 05, 2022 and completed on Feb. 09, 2023. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

*Sporton International Inc. Hsinchu Laboratory*
*No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)*

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# History of this test report

| Report No. | Version | Description | Issued Date |
|---|---|---|---|
| FR2O0714AC | 01 | Initial issue of report | Apr. 26, 2023 |
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# Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---|---|---|---|---|
| 1.1.2 | 15.203 | Antenna Requirement | PASS | - |
| 3.1 | 15.207 | AC Power-line Conducted Emissions | PASS | - |
| 3.2 | 15.247(a) | 20dB Bandwidth | PASS | - |
| 3.2 | 15.247(a) | Carrier Frequency Separation | PASS | - |
| 3.3 | 15.247(b) | Maximum Conducted Output Power | PASS | - |
| 3.4 | 15.247(a) | Number of Hopping Frequencies and Hopping Band edge | PASS | - |
| 3.5 | 15.247(a) | Time of Occupancy (Dwell Time) | PASS | - |
| 3.6 | 15.247(d) | Emissions in Non-restricted Frequency Bands | PASS | - |
| 3.7 | 15.247(d) | Emissions in Restricted Frequency Bands | PASS | - |

| **Declaration of Conformity:** |
|---|
| 1. The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.<br>2. The measurement uncertainty please refer to report "Measurement Uncertainty". |
| **Comments and Explanations:** |
| The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification. |

**Reviewed by: Sam Chen**
**Report Producer: Vicky Huang**

# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

| Frequency Range (MHz) | Bluetooth Version | Ch. Frequency (MHz) | Channel Number |
|---|---|---|---|
| 2400-2483.5 | BR / EDR | 2402-2480 | 0-78 [79] |

| Band | Mode | BWch (MHz) | Nant |
|---|---|---|---|
| 2400-2483.5 | BT-BR(1Mbps) | 1 | 1 |
| 2400-2483.5 | BT-EDR(2Mbps) | 1 | 1 |
| 2400-2483.5 | BT-EDR(3Mbps) | 1 | 1 |

Note:
- Bluetooth BR uses a GFSK (1Mbps).
- Bluetooth EDR uses a combination of π/4-DQPSK (2Mbps) and 8DPSK (3Mbps).
- Bluetooth BR/EDR uses as a system using FHSS modulation.
- BWch is the nominal channel bandwidth.

### 1.1.2 Antenna Information

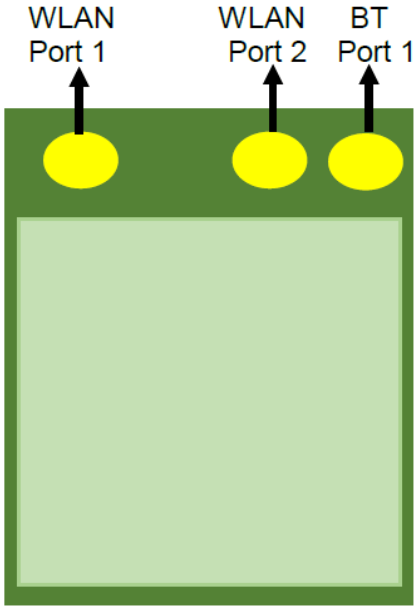
| Ant. | Port | | | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|---|---|---|---|---|---|---|---|---|
| | WLAN 2.4GHz | WLAN 5GHz | Bluetooth | | | | | |
| 1 | 1/2 | 1/2 | 1 | MAG. LAYERS | MSA-4008-25GC1-A2 | PIFA | I-PEX | Note 1 |
| 2 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(100) | Dipole | I-PEX | |
| 3 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(110) | Dipole | I-PEX | |
| 4 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(120) | Dipole | I-PEX | |
| 5 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(130) | Dipole | I-PEX | |
| 6 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(140) | Dipole | I-PEX | |
| 7 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(150) | Dipole | I-PEX | |
| 8 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(160) | Dipole | I-PEX | |
| 9 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(170) | Dipole | I-PEX | |
| 10 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(180) | Dipole | I-PEX | |
| 11 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(190) | Dipole | I-PEX | |
| 12 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(200) | Dipole | I-PEX | |
| 13 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(210) | Dipole | I-PEX | |
| 14 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(220) | Dipole | I-PEX | |
| 15 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(230) | Dipole | I-PEX | |
| 16 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(240) | Dipole | I-PEX | |
| 17 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(250) | Dipole | I-PEX | |
| 18 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(260) | Dipole | I-PEX | |
| 19 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(270) | Dipole | I-PEX | |
| 20 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(280) | Dipole | I-PEX | |
| 21 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(290) | Dipole | I-PEX | |
| 22 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(300) | Dipole | I-PEX | |
| 23 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(310) | Dipole | I-PEX | |
| 24 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(320) | Dipole | I-PEX | |
| 25 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(330) | Dipole | I-PEX | |
| 26 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(340) | Dipole | I-PEX | |
| 27 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(350) | Dipole | I-PEX | |
| 28 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(360) | Dipole | I-PEX | |
| 29 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(370) | Dipole | I-PEX | |
| 30 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(380) | Dipole | I-PEX | |
| 31 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(390) | Dipole | I-PEX | |
| 32 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(400) | Dipole | I-PEX | |
| 33 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(410) | Dipole | I-PEX | |
| 34 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(420) | Dipole | I-PEX | |
| 35 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(430) | Dipole | I-PEX | |
| 36 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(440) | Dipole | I-PEX | |
| 37 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(450) | Dipole | I-PEX | |
| 38 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(460) | Dipole | I-PEX | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 39 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(470) | Dipole | I-PEX | Note 1 |
| 40 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(480) | Dipole | I-PEX | |
| 41 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(490) | Dipole | I-PEX | |
| 42 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(500) | Dipole | I-PEX | |
| 43 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(510) | Dipole | I-PEX | |
| 44 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(520) | Dipole | I-PEX | |
| 45 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(530) | Dipole | I-PEX | |
| 46 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(540) | Dipole | I-PEX | |
| 47 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(550) | Dipole | I-PEX | |
| 48 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(560) | Dipole | I-PEX | |
| 49 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(570) | Dipole | I-PEX | |
| 50 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(580) | Dipole | I-PEX | |
| 51 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(590) | Dipole | I-PEX | |
| 52 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(600) | Dipole | I-PEX | |
| 53 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(610) | Dipole | I-PEX | |
| 54 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(620) | Dipole | I-PEX | |
| 55 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(630) | Dipole | I-PEX | |
| 56 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(640) | Dipole | I-PEX | |
| 57 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(650) | Dipole | I-PEX | |
| 58 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(660) | Dipole | I-PEX | |
| 59 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(670) | Dipole | I-PEX | |
| 60 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(680) | Dipole | I-PEX | |
| 61 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(690) | Dipole | I-PEX | |
| 62 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(700) | Dipole | I-PEX | |
| 63 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(710) | Dipole | I-PEX | |
| 64 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(720) | Dipole | I-PEX | |
| 65 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(730) | Dipole | I-PEX | |
| 66 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(740) | Dipole | I-PEX | |
| 67 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(750) | Dipole | I-PEX | |
| 68 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(760) | Dipole | I-PEX | |
| 69 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(770) | Dipole | I-PEX | |
| 70 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(780) | Dipole | I-PEX | |
| 71 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(790) | Dipole | I-PEX | |
| 72 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-D(800) | Dipole | I-PEX | |
| 73 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(100) | Dipole | I-PEX | |
| 74 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(110) | Dipole | I-PEX | |
| 75 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(120) | Dipole | I-PEX | |
| 76 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(130) | Dipole | I-PEX | |
| 77 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(140) | Dipole | I-PEX | |
| 78 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(150) | Dipole | I-PEX | |
| 79 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(160) | Dipole | I-PEX | |
| 80 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(170) | Dipole | I-PEX | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 81 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(180) | Dipole | I-PEX | Note 1 |
| 82 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(190) | Dipole | I-PEX | |
| 83 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(200) | Dipole | I-PEX | |
| 84 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(210) | Dipole | I-PEX | |
| 85 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(220) | Dipole | I-PEX | |
| 86 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(230) | Dipole | I-PEX | |
| 87 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(240) | Dipole | I-PEX | |
| 88 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(250) | Dipole | I-PEX | |
| 89 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(260) | Dipole | I-PEX | |
| 90 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(270) | Dipole | I-PEX | |
| 91 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(280) | Dipole | I-PEX | |
| 92 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(290) | Dipole | I-PEX | |
| 93 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(300) | Dipole | I-PEX | |
| 94 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(310) | Dipole | I-PEX | |
| 95 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(320) | Dipole | I-PEX | |
| 96 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(330) | Dipole | I-PEX | |
| 97 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(340) | Dipole | I-PEX | |
| 98 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(350) | Dipole | I-PEX | |
| 99 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(360) | Dipole | I-PEX | |
| 100 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(370) | Dipole | I-PEX | |
| 101 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(380) | Dipole | I-PEX | |
| 102 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(390) | Dipole | I-PEX | |
| 103 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(400) | Dipole | I-PEX | |
| 104 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(410) | Dipole | I-PEX | |
| 105 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(420) | Dipole | I-PEX | |
| 106 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(430) | Dipole | I-PEX | |
| 107 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(440) | Dipole | I-PEX | |
| 108 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(450) | Dipole | I-PEX | |
| 109 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(460) | Dipole | I-PEX | |
| 110 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(470) | Dipole | I-PEX | |
| 111 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(480) | Dipole | I-PEX | |
| 112 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(490) | Dipole | I-PEX | |
| 113 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(500) | Dipole | I-PEX | |
| 114 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(510) | Dipole | I-PEX | |
| 115 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(520) | Dipole | I-PEX | |
| 116 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(530) | Dipole | I-PEX | |
| 117 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(540) | Dipole | I-PEX | |
| 118 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(550) | Dipole | I-PEX | |
| 119 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(560) | Dipole | I-PEX | |
| 120 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(570) | Dipole | I-PEX | |
| 121 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(580) | Dipole | I-PEX | |
| 122 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(590) | Dipole | I-PEX | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 123 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(600) | Dipole | I-PEX | |
| 124 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(610) | Dipole | I-PEX | |
| 125 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(620) | Dipole | I-PEX | |
| 126 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(630) | Dipole | I-PEX | |
| 127 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(640) | Dipole | I-PEX | |
| 128 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(650) | Dipole | I-PEX | |
| 129 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(660) | Dipole | I-PEX | |
| 130 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(670) | Dipole | I-PEX | |
| 131 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(680) | Dipole | I-PEX | |
| 132 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(690) | Dipole | I-PEX | |
| 133 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(700) | Dipole | I-PEX | Note 1 |
| 134 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(710) | Dipole | I-PEX | |
| 135 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(720) | Dipole | I-PEX | |
| 136 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(730) | Dipole | I-PEX | |
| 137 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(740) | Dipole | I-PEX | |
| 138 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(750) | Dipole | I-PEX | |
| 139 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(760) | Dipole | I-PEX | |
| 140 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(770) | Dipole | I-PEX | |
| 141 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(780) | Dipole | I-PEX | |
| 142 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(790) | Dipole | I-PEX | |
| 143 | 1/2 | 1/2 | 1 | SONY | IW611-IW620-G(800) | Dipole | I-PEX | |

**WLAN Port1 / WLAN Port2 / BT Port 1 Location**



Note 1:

| Ant. | Gain (dBi) | |
|---|---|---|
| | WLAN 2.4GHz/Bluetooth | WLAN 5GHz |
| 1 | 2.98 | 5.16 |
| 2 | 0.38 | 1.68 |
| 3 | 0.35 | 1.63 |
| 4 | 0.32 | 1.59 |
| 5 | 0.28 | 1.54 |
| 6 | 0.25 | 1.49 |
| 7 | 0.22 | 1.45 |
| 8 | 0.19 | 1.4 |
| 9 | 0.16 | 1.36 |
| 10 | 0.13 | 1.31 |
| 11 | 0.09 | 1.26 |
| 12 | 0.06 | 1.22 |
| 13 | 0.03 | 1.17 |
| 14 | 0.00 | 1.12 |
| 15 | -0.03 | 1.08 |
| 16 | -0.06 | 1.03 |
| 17 | -0.10 | 0.99 |
| 18 | -0.13 | 0.94 |
| 19 | -0.16 | 0.89 |
| 20 | -0.19 | 0.85 |
| 21 | -0.22 | 0.8 |
| 22 | -0.25 | 0.75 |
| 23 | -0.29 | 0.71 |
| 24 | -0.32 | 0.66 |
| 25 | -0.35 | 0.62 |
| 26 | -0.38 | 0.57 |
| 27 | -0.41 | 0.52 |
| 28 | -0.44 | 0.48 |
| 29 | -0.48 | 0.43 |
| 30 | -0.51 | 0.38 |
| 31 | -0.54 | 0.34 |
| 32 | -0.57 | 0.29 |
| 33 | -0.60 | 0.24 |
| 34 | -0.63 | 0.2 |
| 35 | -0.67 | 0.15 |
| 36 | -0.70 | 0.11 |
| 37 | -0.73 | 0.06 |
| 38 | -0.76 | 0.01 |

| | | |
|---|---|---|
| 39 | -0.79 | -0.03 |
| 40 | -0.82 | -0.08 |
| 41 | -0.86 | -0.13 |
| 42 | -0.89 | -0.17 |
| 43 | -0.92 | -0.22 |
| 44 | -0.95 | -0.26 |
| 45 | -0.98 | -0.31 |
| 46 | -1.01 | -0.36 |
| 47 | -1.05 | -0.4 |
| 48 | -1.08 | -0.45 |
| 49 | -1.11 | -0.5 |
| 50 | -1.14 | -0.54 |
| 51 | -1.17 | -0.59 |
| 52 | -1.21 | -0.64 |
| 53 | -1.24 | -0.68 |
| 54 | -1.27 | -0.73 |
| 55 | -1.30 | -0.77 |
| 56 | -1.33 | -0.82 |
| 57 | -1.36 | -0.87 |
| 58 | -1.40 | -0.91 |
| 59 | -1.43 | -0.96 |
| 60 | -1.46 | -1.01 |
| 61 | -1.49 | -1.05 |
| 62 | -1.52 | -1.1 |
| 63 | -1.55 | -1.14 |
| 64 | -1.59 | -1.19 |
| 65 | -1.62 | -1.24 |
| 66 | -1.65 | -1.28 |
| 67 | -1.68 | -1.33 |
| 68 | -1.71 | -1.38 |
| 69 | -1.74 | -1.42 |
| 70 | -1.78 | -1.47 |
| 71 | -1.81 | -1.51 |
| 72 | -1.84 | -1.56 |
| 73 | 0.29 | 1.36 |
| 74 | 0.26 | 1.31 |
| 75 | 0.23 | 1.27 |
| 76 | 0.19 | 1.22 |
| 77 | 0.16 | 1.17 |
| 78 | 0.13 | 1.13 |
| 79 | 0.10 | 1.08 |

| | | |
|---|---|---|
| 80 | 0.07 | 1.04 |
| 81 | 0.04 | 0.99 |
| 82 | 0.00 | 0.94 |
| 83 | -0.03 | 0.9 |
| 84 | -0.06 | 0.85 |
| 85 | -0.09 | 0.8 |
| 86 | -0.12 | 0.76 |
| 87 | -0.15 | 0.71 |
| 88 | -0.19 | 0.67 |
| 89 | -0.22 | 0.62 |
| 90 | -0.25 | 0.57 |
| 91 | -0.28 | 0.53 |
| 92 | -0.31 | 0.48 |
| 93 | -0.34 | 0.43 |
| 94 | -0.38 | 0.39 |
| 95 | -0.41 | 0.34 |
| 96 | -0.44 | 0.3 |
| 97 | -0.47 | 0.25 |
| 98 | -0.50 | 0.2 |
| 99 | -0.53 | 0.16 |
| 100 | -0.57 | 0.11 |
| 101 | -0.60 | 0.06 |
| 102 | -0.63 | 0.02 |
| 103 | -0.66 | -0.03 |
| 104 | -0.69 | -0.08 |
| 105 | -0.72 | -0.12 |
| 106 | -0.76 | -0.17 |
| 107 | -0.79 | -0.21 |
| 108 | -0.82 | -0.26 |
| 109 | -0.85 | -0.31 |
| 110 | -0.88 | -0.35 |
| 111 | -0.91 | -0.4 |
| 112 | -0.95 | -0.45 |
| 113 | -0.98 | -0.49 |
| 114 | -1.01 | -0.54 |
| 115 | -1.04 | -0.58 |
| 116 | -1.07 | -0.63 |
| 117 | -1.10 | -0.68 |
| 118 | -1.14 | -0.72 |
| 119 | -1.17 | -0.77 |
| 120 | -1.20 | -0.82 |

| | | |
|---|---|---|
| 121 | -1.23 | -0.86 |
| 122 | -1.26 | -0.91 |
| 123 | -1.30 | -0.96 |
| 124 | -1.33 | -1 |
| 125 | -1.36 | -1.05 |
| 126 | -1.39 | -1.09 |
| 127 | -1.42 | -1.14 |
| 128 | -1.45 | -1.19 |
| 129 | -1.49 | -1.23 |
| 130 | -1.52 | -1.28 |
| 131 | -1.55 | -1.33 |
| 132 | -1.58 | -1.37 |
| 133 | -1.61 | -1.42 |
| 134 | -1.64 | -1.46 |
| 135 | -1.68 | -1.51 |
| 136 | -1.71 | -1.56 |
| 137 | -1.74 | -1.6 |
| 138 | -1.77 | -1.65 |
| 139 | -1.80 | -1.7 |
| 140 | -1.83 | -1.74 |
| 141 | -1.87 | -1.79 |
| 142 | -1.90 | -1.83 |
| 143 | -1.93 | -1.88 |

Note2: The above information was declared by manufacturer.

For the radiated test: The EUT has two types of antenna. Only the highest gain antenna was selected from each different type of antenna to test and record in this report. Thus, Antenna 1 and 2 were selected to perform the test.

For the conducted test: The EUT has two types of antenna. Only the highest gain antenna was selected to test and record in this report. Thus, Antenna 1 was selected to perform the test.

**<For WLAN 2.4GHz function>**

For IEEE 802.11b/g/n/VHT/ax (2TX/2RX):

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

**<For WLAN 5GHz function>**

**For IEEE 802.11a/n/ac/ax (2TX/2RX):**

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

**<For Bluetooth function> (1TX/1RX):**

Only Port 1 can be used as transmitting/receiving antenna.

Each antenna port, please refer to the photographs of EUT.

Note 3: Directional gain information

| Type | Maximum Output Power | Power Spectral Density |
|---|---|---|
| Non-BF | Directional gain = Max.gain + array gain.<br>For power measurements on IEEE 802.11 devices<br>Array Gain = 0 dB (i.e., no array gain) for N ANT ≤ 4 | $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left[\sum_{k=1}^{N_{ANT}} g_{j,k}\right]^2}{N_{ANT}}\right]$ |
| BF | $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left[\sum_{k=1}^{N_{ANT}} g_{j,k}\right]^2}{N_{ANT}}\right]$ | $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left[\sum_{k=1}^{N_{ANT}} g_{j,k}\right]^2}{N_{ANT}}\right]$ |

Ex.

Directional Gain (NSS1) formula : $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left[\sum_{k=1}^{N_{ANT}} g_{j,k}\right]^2}{N_{ANT}}\right]$

NSS1(g1,1) = $10^{G1/20}$ ; NSS1(g1,2)= $10^{G2/20}$

$g_{j,k}$ =(Nss1(g1,1) + Nss1(g1,2) )$^2$

DG = 10 log[(Nss1(g1,1) + Nss1(g1,2) )$^2$ / $N_{ANT}$]

=> 10 log[($10^{G1/20}$ + $10^{G2/20}$ )$^2$ / $N_{ANT}$]

Where ;

Antenna Gain

2.4G G1 = 2.98 dBi; G2 = 2.98 dBi

5G Band1 G1 = 5.16dBi; G2 = 5.16 dBi

5G Band2 G1 = 5.16dBi; G2 = 5.16 dBi

5G Band3 G1 = 5.16dBi; G2 = 5.16 dBi

5G Band4 G1 = 5.16dBi; G2 = 5.16 dBi

2.4G

DG = 5.99 dBi

5G

Band1 DG = 8.17 dBi

Band2 DG = 8.17 dBi

Band3 DG = 8.17 dBi

Band4 DG = 8.17 dBi

### 1.1.3 Mode Test Duty Cycle

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) ≥ 1/T |
|---|---|---|---|---|
| BT-BR(1Mbps) | 0.742 | 1.3 | 2.89m | 1k |
| BT-EDR(2Mbps) | 0.742 | 1.3 | 2.89m | 1k |
| BT-EDR(3Mbps) | 0.741 | 1.3 | 2.89m | 1k |

Note:
- DC is Duty Cycle.
- DCF is Duty Cycle Factor.

### 1.1.4 EUT Operational Condition

| | |
|---|---|
| **EUT Power Type** | From host system |
| **Test Software Version** | DutApiMimoApApp (V 1.0.0.114)、DOS[ver 6.1.7601] |

### 1.1.5 Table for Hardware Information

| Hardware Version | Description |
|---|---|
| V04 | The difference between V04 and V05 is the layout of DC-DC power and xtal. |
| V05 | All RF layouts are the same. |

Note: The above information was declared by manufacturer.

### 1.1.6 Table for EUT Combination

| EUT | Hardware Version | Antenna Trace Type | Equip Antenna |
|---|---|---|---|
| 1 | V04 | Design to PIFA use | Ant. 1 |
| 2 | V05 | Design to PIFA use | Ant. 1 |
| 3 | V04 | Design to Dipole use | Ant. 2~143 |
| 4 | V05 | Design to Dipole use | Ant. 2~143 |

Note:

After evaluating, the EUT 1~4 were selected to test AC power-line conducted emissions and Emissions in Restricted Frequency Bands below 1GHz. The EUT 2 and EUT 4 were selected to test Restricted Frequency Bands above 1GHz. The EUT 2 was selected to test other test items.

## 1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15.247

The following reference test guidance is not within the scope of accreditation of TAF.

- FCC KDB 558074 D01 v05r02
- FCC KDB 414788 D01 v01r01

## 1.3 Testing Location Information

| Testing Location Information | |
|---|---|
| Test Lab.：Sporton International Inc. Hsinchu Laboratory | |
| Hsinchu (TAF: 3787) | ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)<br>TEL: 886-3-656-9065 FAX: 886-3-656-9085<br>Test site Designation No. TW3787 with FCC.<br>Conformity Assessment Body Identifier (CABID) TW3787 with ISED. |

| Test Condition | Test Site No. | Test Engineer | Test Environment (°C / %) | Test Date |
|---|---|---|---|---|
| RF Conducted | TH03-CB | Eason Chen | 24.1-25.1 / 62-68 | Nov. 11, 2022 ~ Jan. 18, 2023 |
| Radiated (Below 1GHz) | 03CH06-CB | Stim Sung | 24.4-25.5 / 55-58 | Jan. 30, 2023 ~ Jan. 31, 2023 |
| Radiated (Above 1GHz) | 03CH01-CB | Ken Yeh | 21.6~22.1 / 59~62 | Nov. 05, 2022 ~ Jan. 16, 2023 |
| | 03CH02-CB | Ken Yeh | 21.9~22.3 / 60~65 | Nov. 05, 2022 ~ Jan. 16, 2023 |
| AC Conduction | CO01-CB | Elvin Yeh | 22~23 / 50~51 | Feb. 09, 2023 |

## 1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

| Test Items | Uncertainty | Remark |
|---|---|---|
| Conducted Emission (150kHz ~ 30MHz) | 3.4 dB | Confidence levels of 95% |
| Radiated Emission (9kHz ~ 30MHz) | 3.4 dB | Confidence levels of 95% |
| Radiated Emission (30MHz ~ 1,000MHz) | 5.6 dB | Confidence levels of 95% |
| Radiated Emission (1GHz ~ 18GHz) | 5.2 dB | Confidence levels of 95% |
| Radiated Emission (18GHz ~ 40GHz) | 4.7 dB | Confidence levels of 95% |
| Conducted Emission | 3.2 dB | Confidence levels of 95% |
| Output Power Measurement | 0.8 dB | Confidence levels of 95% |
| Power Density Measurement | 3.2 dB | Confidence levels of 95% |
| Bandwidth Measurement | 2.0 % | Confidence levels of 95% |

# 2 Test Configuration of EUT

## 2.1 Test Channel Mode

| Mode | Power Setting |
|---|---|
| BT-BR(1Mbps) | - |
| 2402MHz | 4 |
| 2440MHz | 4 |
| 2480MHz | 4 |
| BT-EDR(2Mbps) | - |
| 2402MHz | 4 |
| 2440MHz | 4 |
| 2480MHz | 4 |
| BT-EDR(3Mbps) | - |
| 2402MHz | 4 |
| 2440MHz | 4 |
| 2480MHz | 4 |

## 2.2 The Worst Case Measurement Configuration

| The Worst Case Mode for Following Conformance Tests | |
|---|---|
| **Tests Item** | AC power-line conducted emissions |
| **Condition** | AC power-line conducted measurement for line and neutral<br>Test Voltage: 120Vac / 60Hz |
| **Operating Mode** | Normal Link |
| 1 | Normal Link:EUT1-WLAN 2.4GHz+Bluetooth+Ant. 1 |
| 2 | Normal Link:EUT1-WLAN 5GHz+Bluetooth+Ant. 1 |
| 3 | Normal Link:EUT2-WLAN 2.4GHz+Bluetooth+Ant. 1 |
| 4 | Normal Link:EUT2-WLAN 5GHz+Bluetooth+Ant. 1 |
| 5 | Normal Link:EUT3-WLAN 2.4GHz+Bluetooth+Ant. 2 |
| 6 | Normal Link:EUT3-WLAN 5GHz+Bluetooth+Ant. 2 |
| 7 | Normal Link:EUT4-WLAN 2.4GHz+Bluetooth+Ant. 2 |
| 8 | Normal Link:EUT4-WLAN 5GHz+Bluetooth+Ant. 2 |
| For operating mode 1 is the worst case and it was record in this test report. | |

| The Worst Case Mode for Following Conformance Tests | |
|---|---|
| **Tests Item** | 20dB Bandwidth<br>Carrier Frequency Separation<br>Maximum Conducted Output Power<br>Number of Hopping Frequencies<br>Hopping Bandedge<br>Time of Occupancy (Dwell Time)<br>Emissions in Non-restricted Frequency Bands |
| **Test Condition** | Conducted measurement at transmit chains |
| **Operating Mode** | CTX |
| 1 | EUT2+Ant. 1 |

| The Worst Case Mode for Following Conformance Tests | |
|---|---|
| **Tests Item** | Emissions in Restricted Frequency Bands |
| **Test Condition** | Radiated measurement<br>If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type. |
| **Operating Mode < 1GHz** | Normal Link |
| 1 | EUT1 in X axis-WLAN 2.4GHz+Bluetooth+Ant. 1 |
| 2 | EUT1 in Y axis-WLAN 2.4GHz+Bluetooth+Ant. 1 |
| 3 | EUT1 in Z axis-WLAN 2.4GHz+Bluetooth+Ant. 1 |

| | |
|---|---|
| Mode 3 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode. | |
| 4 | EUT1 in Z axis-WLAN 5GHz+Bluetooth+Ant. 1 |
| Mode 3 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5 will follow this same test mode. | |
| 5 | EUT2 in Z axis-WLAN 2.4GHz+Bluetooth+Ant. 1 |
| 6 | EUT3 in X axis-WLAN 2.4GHz+Bluetooth+Ant. 2 |
| 7 | EUT3 in Y axis-WLAN 2.4GHz+Bluetooth+Ant. 2 |
| 8 | EUT3 in Z axis-WLAN 2.4GHz+Bluetooth+Ant. 2 |
| Mode 6 has been evaluated to be the worst case among Mode 6~8, thus measurement for Mode 9 will follow this same test mode. | |
| 9 | EUT3 in X axis-WLAN 5GHz+Bluetooth+Ant. 2 |
| Mode 6 has been evaluated to be the worst case among Mode 6~9, thus measurement for Mode 10 will follow this same test mode. | |
| 10 | EUT4 in X axis-WLAN 2.4GHz+Bluetooth+Ant. 2 |
| For operating mode 3 is the worst case and it was record in this test report. | |
| **Operating Mode > 1GHz** | CTX |
| The EUT was performed at X axis, Y axis and Z axis position, and the worst case as below: | |
| 1 | EUT 2 in Y axis+Ant. 1 |
| 2 | EUT 4 in Z axis+Ant. 2 |

## 2.3 EUT Operation during Test

For CTX Mode:
The EUT was programmed to be in continuously transmitting mode.

For Normal Link Mode:
During the test, the EUT operation to normal function.

## 2.4 Accessories

N/A

## 2.5 Support Equipment

**For AC Conduction:**

| Support Equipment | | | | |
|---|---|---|---|---|
| **No.** | **Equipment** | **Brand Name** | **Model Name** | **FCC ID** |
| A | Fixture | Azurewave | 2455-I4 | N/A |
| B | NB | acer | ZQW | N/A |
| C | Earphone | e-Power | S90W | N/A |
| D | Mouse | acer | MOBVUO | N/A |
| E | Smart phone | Samsung | Galaxy J2 | A3LSMJ200F |
| F | AP Router | TP-LINK | Archer AX10 | TE7AX10V1 |

**For Radiated (below 1GHz):**

| Support Equipment | | | | |
|---|---|---|---|---|
| **No.** | **Equipment** | **Brand Name** | **Model Name** | **FCC ID** |
| A | NB | DELL | E4300 | N/A |
| B | Fixture | Azurewave | 2455-I4 | N/A |
| C | WLAN AP | NETGEAR | WNDR3300v2 | PY309300116 |
| D | iPhone 4 | Apple | A1332 | BCG-E2380A |
| E | Mouse | Logitech | M-U0026 | N/A |
| F | Earphone | e-Power | S90W | N/A |

**For Radiated (above 1GHz):**
**Mode 1:**

| Support Equipment | | | | |
|---|---|---|---|---|
| **No.** | **Equipment** | **Brand Name** | **Model Name** | **FCC ID** |
| A | NB | DELL | E4300 | N/A |
| B | NB | DELL | E4300 | N/A |
| C | Fixture | Azurewave | 2455-I4 | N/A |

**Mode 2:**

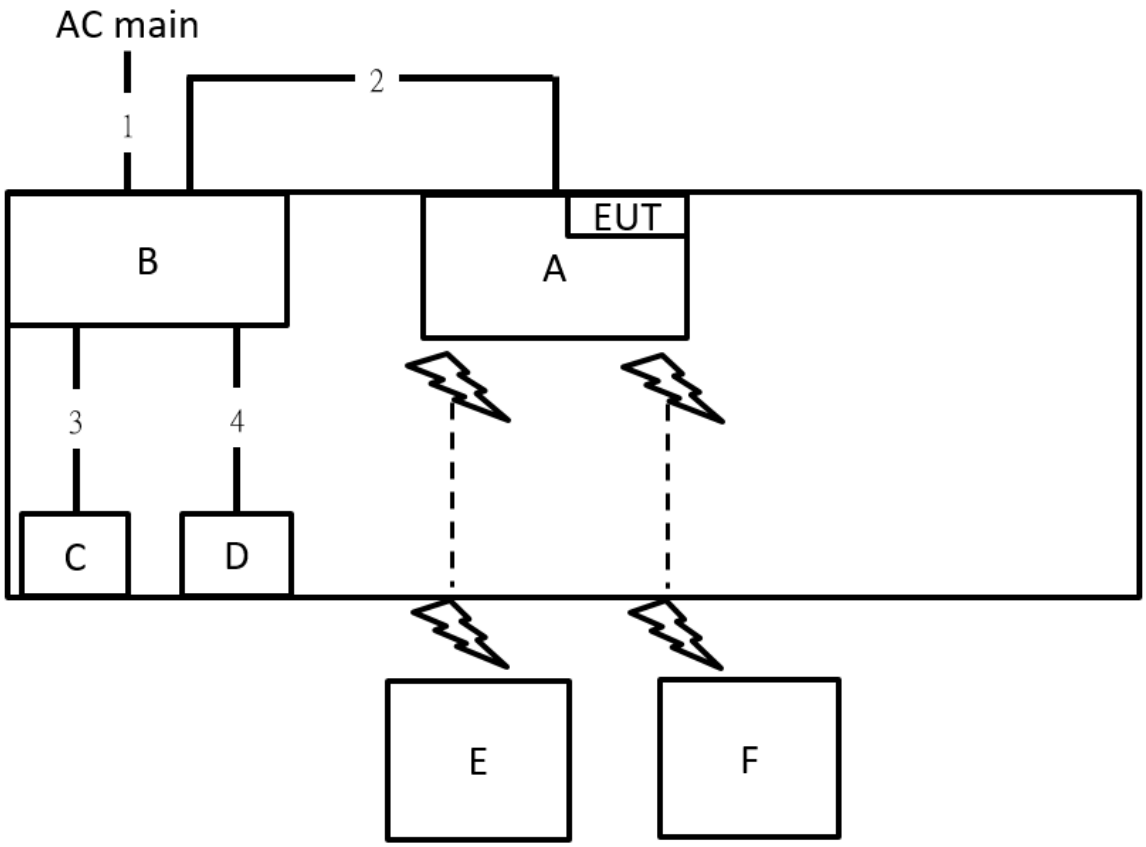
| Support Equipment | | | | |
|---|---|---|---|---|
| **No.** | **Equipment** | **Brand Name** | **Model Name** | **FCC ID** |
| A | NB | DELL | E4300 | N/A |
| B | NB | DELL | E4300 | N/A |
| C | Fixture | Azurewave | 2455-I5 | N/A |

**For RF Conducted:**

| Support Equipment | | | | |
|---|---|---|---|---|
| **No.** | **Equipment** | **Brand Name** | **Model Name** | **FCC ID** |
| A | NB | DELL | E4300 | N/A |
| B | NB | DELL | E4300 | N/A |
| C | Fixture | Azurewave | 2455-I4 | N/A |

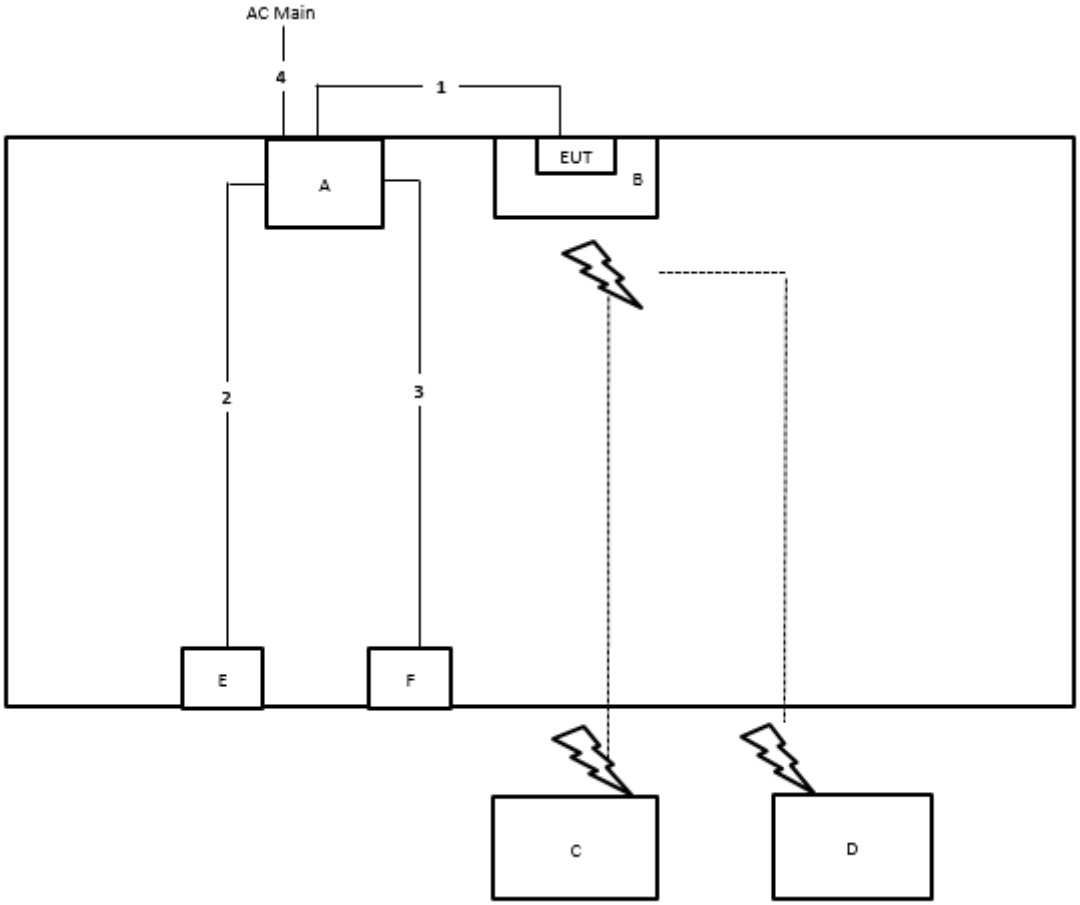
## 2.6 Test Setup Diagram

**Test Setup Diagram – AC Line Conducted Emission Test**



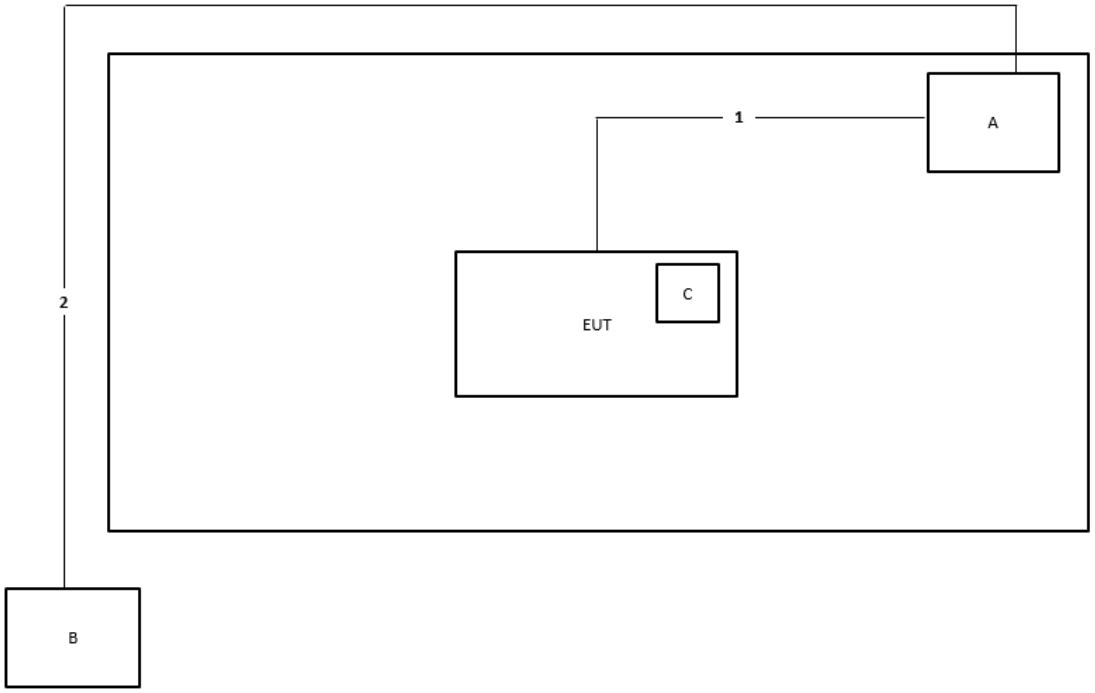

| Item | Connection | Shielded | Length |
|---|---|---|---|
| 1 | Power cable | No | 2.9m |
| 2 | USB to Type C cable | Yes | 1m |
| 3 | Audio cable | No | 1.2m |
| 4 | USB cable | Yes | 1m |

**Test Setup Diagram - Radiated Test < 1GHz**




| Item | Connection | Shielded | Length |
|---|---|---|---|
| 1 | USB to Type C cable | Yes | 0.3m |
| 2 | USB cable | Yes | 1m |
| 3 | Audio cable | No | 1.2m |
| 4 | Power cable | No | 1.5m |

**Test Setup Diagram - Radiated Test > 1GHz**




| Item | Connection | Shielded | Length |
|---|---|---|---|
| 1 | USB to Type C cable | Yes | 1.5m |
| 2 | RJ-45 cable | No | 10m |

# 3 Transmitter Test Result

## 3.1 AC Power-line Conducted Emissions

### 3.1.1 AC Power-line Conducted Emissions Limit

| AC Power-line Conducted Emissions Limit | | |
|---|---|---|
| **Frequency Emission (MHz)** | **Quasi-Peak** | **Average** |
| 0.15-0.5 | 66 - 56 * | 56 - 46 * |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |
| Note 1: * Decreases with the logarithm of the frequency. | | |

### 3.1.2 Measuring Instruments

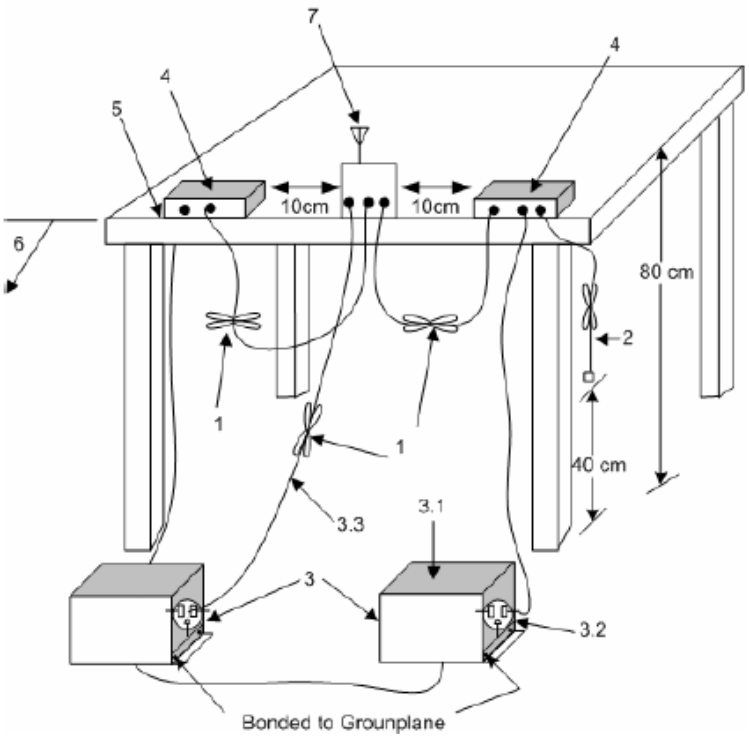
Refer a test equipment and calibration data table in this test report.

### 3.1.3 Test Procedures

| Test Method |
|---|
| ▪ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions. |

### 3.1.4 Test Setup

**AC Power-line Conducted Emissions**




1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

### 1.1.1. Measurement Results Calculation

The measured Level is calculated using:

a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level

b. Margin = -Limit + Level

### 3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

## 3.2 20dB Bandwidth and Carrier Frequency Separation

### 3.2.1 20dB Bandwidth and Carrier Frequency Separation Limit

| 20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems |
|---|
| ▪ 902-928 MHz Band: |
| ▪ N ≥50 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 250 kHz. |
| ▪ 50 >N≥25 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth>250 kHz. |
| ▪ 2400-2483.5 MHz Band: |
| ▪ N ≥75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz). |
| ▪ 75>N ≥ 15 and ChS ≥ MAX (20 dB bandwidth 2/3,25 kHz). |
| ▪ 5725-5850 MHz Band: |
| ▪ N ≥ 75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 1 MHz. |
| **N:**Number of Hopping Frequencies; **ChS**: Hopping Channel Separation |

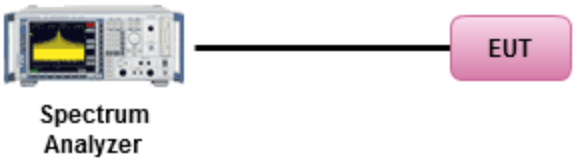
### 3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

### 3.2.3 Test Procedures

| Test Method |
|---|
| ▪ Refer as ANSI C63.10-2013, clause 6.9.1 for 20 dB bandwidth measurement. |
| ▪ Refer as ANSI C63.10-2013, clause 7.8.2 for carrier frequency separation measurement. |

### 3.2.4 Test Setup

| 20dB Bandwidth and Carrier Frequency Separation |
|---|
|  |



### 3.2.5 Test Result of 20dB Bandwidth

Refer as Appendix B

### 3.2.6 Test Result of Carrier Frequency Separation

Refer as Appendix B

# 3.3 Maximum Conducted Output Power

## 3.3.1 Maximum Conducted Output Power Limit

| Maximum Conducted Output Power Limit |
|---|
| ▪ 902-928 MHz Band: |
| ▪ N ≥50; Power 30dBm; EIRP 36dBm |
| ▪ 50 >N≥ 25; Power 23.98dBm; EIRP 29.98dBm |
| ▪ 2400-2483.5 MHz Band: |
| ▪ N ≥ 75; Power 30dBm; EIRP 36dBm |
| ▪ 75 >N ≥ 15; Power 21dBm; EIRP 27dBm |
| ▪ 5725-5850 MHz Band: |
| ▪ N ≥ 75; Power 30dBm; EIRP 36dBm |
| **N:**Number of Hopping Frequencies |

## 3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

## 3.3.3 Test Procedures

| Test Method |
|---|
| ▪ Refer as ANSI C63.10-2013, clause 7.8.5 for output power measurement. |

## 3.3.4 Test Setup

| Maximum Conducted Output Power (Peak Power Meter) |
|---|
|  |



## 3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

# 3.4 Number of Hopping Frequencies and Hopping Bandedge

## 3.4.1 Number of Hopping Frequencies Limit

| Number of Hopping Frequencies Limit |
|---|
| ▪ 902-928 MHz Band: |
| ▪ N ≥50 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 250 kHz. |
| ▪ 50 >N≥ 25 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth>250 kHz. |
| ▪ 2400-2483.5 MHz Band: |
| ▪ N ≥ 75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz). |
| ▪ 75 >N ≥ 15 and ChS ≥ MAX (20 dB bandwidth 2/3,25 kHz). |
| ▪ 5725-5850 MHz Band: |
| ▪ N ≥ 75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 1 MHz. |
| **N:**Number of Hopping Frequencies; **ChS** : Hopping Channel Separation |

## 3.4.2 Hopping Bandedge Limit

Refer clause 3.6.1 and clause 3.7.1

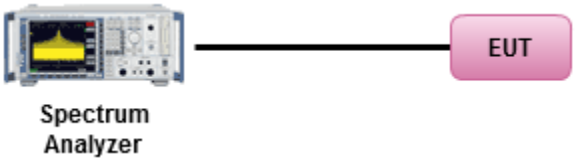
## 3.4.3 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

## 3.4.4 Test Procedures

| Test Method |
|---|
| ▪ Refer as ANSI C63.10-2013, clause 7.8.3 for number of hopping frequencies measurement. |
| ▪ Refer as ANSI C63.10-2013, clause 7.8.6 for hopping frequencies Bandedge measurement. |

## 3.4.5 Test Setup

| Number of Hopping Frequencies and Hopping Frequencies Bandedge |
|---|
|  |

## 3.4.6 Test Result of Number of Hopping Frequencies

Refer as Appendix D

## 3.4.7 Test Result of Number of Hopping Frequencies Bandedge

Refer as Appendix D

# 3.5 Time of Occupancy (Dwell Time)

## 3.5.1 Time of Occupancy (Dwell Time) Limit

| 20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems |
|---|
| ▪ 902-928 MHz Band: |
| ▪ N ≥50; 0.4s in 20s period |
| ▪ 50 >N≥ 25; 0.4s in 10s period |
| ▪ 2400-2483.5 MHz Band: |
| ▪ N ≥ 75; 0.4s in N x 0.4 period |
| ▪ 75 >N ≥ 15; 0.4s in N x 0.4 period |
| ▪ 5725-5850 MHz Band: |
| ▪ N ≥ 75; 0.4s in 30s period |
| **N:**Number of Hopping Frequencies |

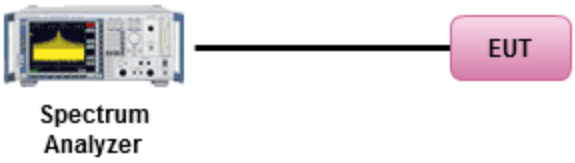
## 3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

## 3.5.3 Test Procedures

| Test Method |
|---|
| ▪ Refer as ANSI C63.10-2013, clause 7.8.4 for dwell time measurement. |
| ▪ Bluetooth ACL packets can be 1, 3, or 5 time slots. Following as dwell time. Operate DH5 at maximum dwell time and maximum duty cycle. |
| ▪ The DH5 packet can cover up to 5 time slots. Operate DH5 at maximum dwell time and maximum duty cycle. A maximum length packet has duration of 5 time slots. The hopping rate is 1600 hops/second so the maximum dwell time is 5/1600 seconds, or 3.125ms.DH5 Packet permit maximum 1600/ 79 / 6 = 3.37 hops per second in each channel. |

## 3.5.4 Test Setup

| Time of Occupancy (Dwell Time) |
|---|
|  |

## 3.5.5 Test Result of Time of Occupancy (Dwell Time)

Refer as Appendix E

# 3.6 Emissions in Non-restricted Frequency Bands

## 3.6.1 Emissions in Non-restricted Frequency Bands Limit

| Un-restricted Band Emissions Limit | |
|---|---|
| **RF output power procedure** | **Limit (dBc)** |
| Peak output power procedure | 20 |
| Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level. | |

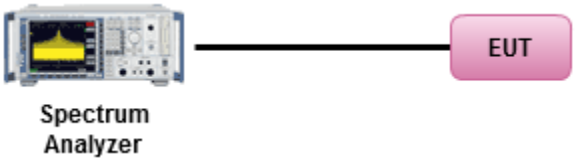
## 3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

## 3.6.3 Test Procedures

| Test Method |
|---|
| ▪ Refer as ANSI C63.10-2013, clause 7.8.8 for unwanted emissions into non-restricted bands. |

## 3.6.4 Test Setup

| Emissions in Non-restricted Frequency Bands |
|---|
|   |

## 3.6.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix F

# 3.7 Emissions in Restricted Frequency Bands

## 3.7.1 Emissions in Restricted Frequency Bands Limit

| Restricted Band Emissions Limit | | | |
|---|---|---|---|
| **Frequency Range (MHz)** | **Field Strength (uV/m)** | **Field Strength (dBuV/m)** | **Measure Distance (m)** |
| 0.009~0.490 | 2400/F(kHz) | 48.5 - 13.8 | 300 |
| 0.490~1.705 | 24000/F(kHz) | 33.8 - 23 | 30 |
| 1.705~30.0 | 30 | 29 | 30 |
| 30~88 | 100 | 40 | 3 |
| 88~216 | 150 | 43.5 | 3 |
| 216~960 | 200 | 46 | 3 |
| Above 960 | 500 | 54 | 3 |

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

## 3.7.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

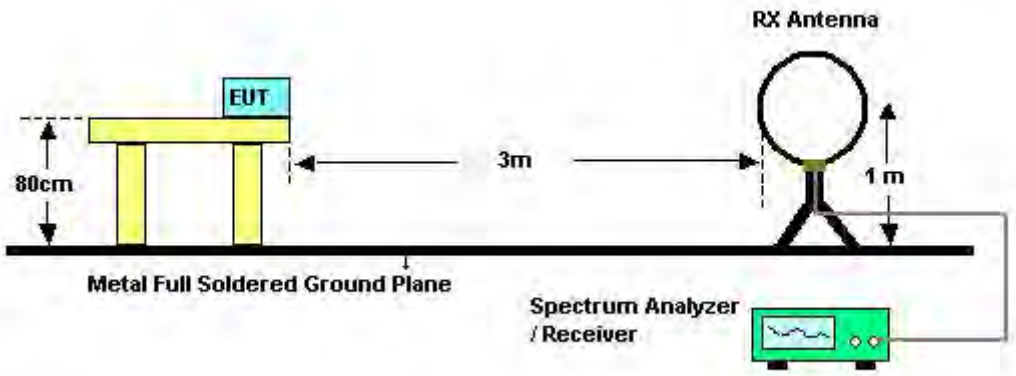
## 3.7.3 Test Procedures

| Test Method | |
|---|---|
| ▪ The average emission levels shall be measured in [hopping duty factor]. | |
| ▪ Refer as ANSI C63.10; clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band. | |
| ▪ For the transmitter unwanted emissions shall be measured using following options below: | |
| | ▪ Refer as ANSI C63.10, clause 4.1.4.2.1 QP value. |
| | ▪ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak. |
| | ▪ Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions. |

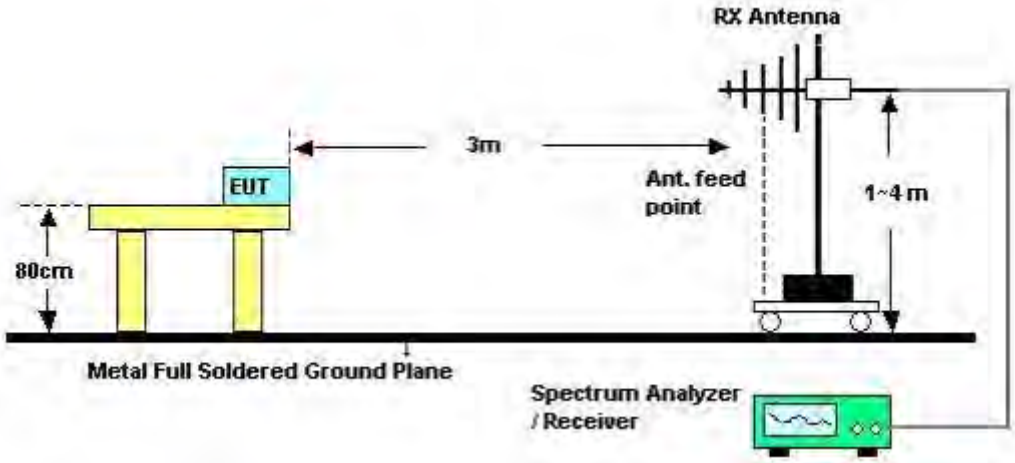
### 3.7.4 Test Setup

**Emissions in Restricted Frequency Bands**

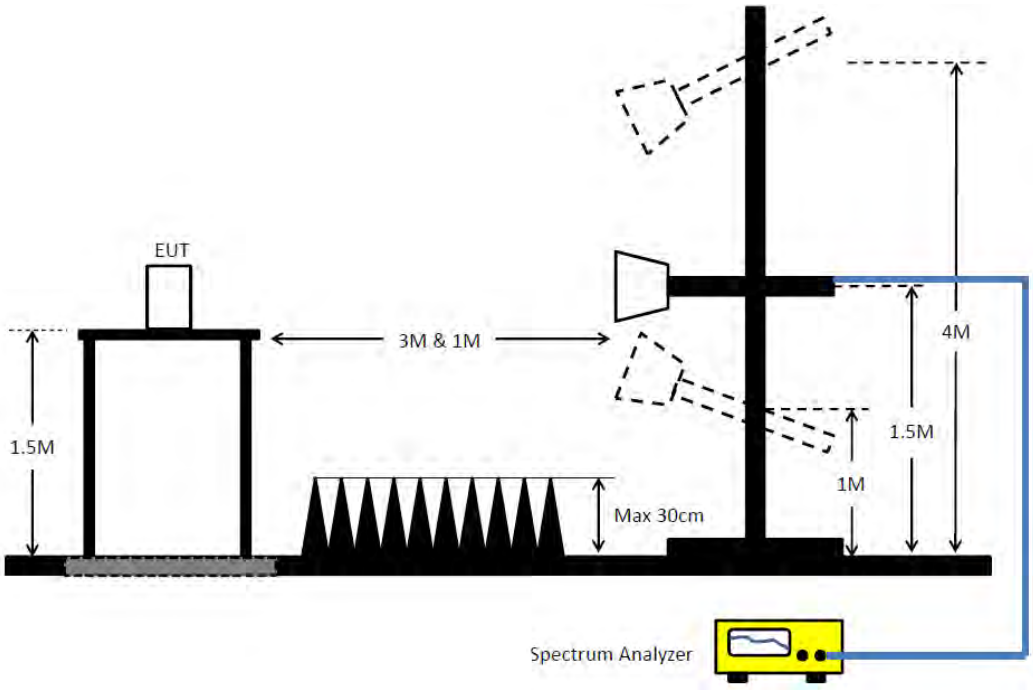
**9kHz ~30MHz**




**30MHz~1GHz**



**Above 1GHz**




### 3.7.5 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

### 3.7.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

### 3.7.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix G

# 4 Test Equipment and Calibration Data

| Instrument | Brand | Model No. | Serial No. | Characteristics | Calibration Date | Calibration Due Date | Remark |
|---|---|---|---|---|---|---|---|
| EMI Receiver | Agilent | N9038A | My52260123 | 9kHz ~ 8.4GHz | Feb. 22, 2022 | Feb. 21, 2023 | Conduction (CO01-CB) |
| LISN | Schwarzbeck | NSLK 8127 | 8127478 | 9kHz ~ 30MHz | Dec. 20, 2022 | Dec. 19, 2023 | Conduction (CO01-CB) |
| LISN | Schwarzbeck | NSLK 8127 | 8127647 | 9kHz ~ 30MHz | Apr. 12, 2022 | Apr. 11, 2023 | Conduction (CO01-CB) |
| Pulse Limiter | Rohde& Schwarz | ESH3-Z2 | 100430 | 9kHz ~ 30MHz | Feb. 09, 2023 | Feb. 08, 2024 | Conduction (CO01-CB) |
| COND Cable | Woken | Cable | Low cable-CO01 | 9kHz ~ 30MHz | Oct. 18, 2022 | Oct. 17, 2023 | Conduction (CO01-CB) |
| Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Conduction (CO01-CB) |
| 3m Semi Anechoic Chamber NSA | TDK | SAC-3M | 03CH06-CB | 30 MHz ~ 1 GHz | Aug. 04, 2022 | Aug. 03. 2023 | Radiation (03CH06-CB) |
| Bilog Antenna with 6 dB attenuator | TESEQ & EMCI | CBL6112D & N-6-06 | 37878 & AT-N0606 | 20MHz ~ 2GHz | Jul. 31, 2022 | Jul. 30, 2023 | Radiation (03CH06-CB) |
| Pre-Amplifier | Agilent | 310N | 187290 | 0.1MHz ~ 1GHz | Nov. 04, 2022 | Nov. 03, 2023 | Radiation (03CH06-CB) |
| Signal Analyzer | R&S | FSV40 | 101904 | 9kHz ~ 40GHz | Apr. 26, 2022 | Apr. 25, 2023 | Radiation (03CH06-CB) |
| EMI Test Receiver | R&S | ESCS | 826547/017 | 9kHz ~ 2.75GHz | Jun. 17, 2022 | Jun. 16, 2023 | Radiation (03CH06-CB) |
| Loop Antenna | Teseq | HLA 6120 | 24155 | 9kHz - 30 MHz | May 14, 2022 | May 13, 2023 | Radiation (03CH06-CB) |
| RF Cable-low | Woken | RG402 | Low Cable-24+68 | 30MHz~1GHz | Oct. 03, 2022 | Oct. 02, 2023 | Radiation (03CH06-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Radiation (03CH06-CB) |
| 3m Semi Anechoic Chamber VSWR | TDK | SAC-3M | 03CH01-CB | 1GHz ~18GHz 3m | May 06, 2022 | May 05, 2023 | Radiation (03CH01-CB) |
| Horn Antenna | ETS-LINDGREN | 3115 | 00075790 | 750MHz ~ 18GHz | Nov. 04, 2022 | Nov. 03, 2023 | Radiation (03CH01-CB) |
| Horn Antenna | Schwarzbeck | BBHA 9170 | BBHA9170252 | 15GHz ~ 40GHz | Aug. 22, 2022 | Aug. 21, 2023 | Radiation (03CH01-CB) |
| Pre-Amplifier | Agilent | 8449B | 3008A02121 | 1GHz ~ 26.5GHz | May 19, 2022 | May 18, 2023 | Radiation (03CH01-CB) |
| Spectrum Analyzer | R&S | FSP40 | 100056 | 9kHz ~ 40GHz | May 06, 2022 | May 05, 2023 | Radiation (03CH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-16 | 1 GHz ~ 18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Radiation (03CH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-16+17 | 1 GHz ~ 18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Radiation (03CH01-CB) |

| Instrument | Brand | Model No. | Serial No. | Characteristics | Calibration Date | Calibration Due Date | Remark |
|---|---|---|---|---|---|---|---|
| High Cable | Woken | WCA0929M | 40G#5+7 | 1GHz ~ 40 GHz | Dec. 14, 2021 | Dec. 13, 2022 | Radiation (03CH01-CB) |
| High Cable | Woken | WCA0929M | 40G#5+6 | 1GHz ~ 40 GHz | Dec. 07, 2022 | Dec. 06, 2023 | Radiation (03CH01-CB) |
| High Cable | Woken | WCA0929M | 40G#5 | 1GHz ~ 40 GHz | Dec. 08, 2021 | Dec. 07, 2022 | Radiation (03CH01-CB) |
| High Cable | Woken | WCA0929M | 40G#5 | 1GHz ~ 40 GHz | Dec. 07, 2022 | Dec. 06, 2023 | Radiation (03CH01-CB) |
| High Cable | Woken | WCA0929M | 40G#7 | 1GHz ~ 40 GHz | Dec. 14, 2021 | Dec. 13, 2022 | Radiation (03CH01-CB) |
| High Cable | Woken | WCA0929M | 40G#6 | 1GHz ~ 40 GHz | Dec. 07, 2022 | Dec. 06, 2023 | Radiation (03CH01-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Radiation (03CH01-CB) |
| 3m Semi Anechoic Chamber VSWR | RIKEN | SAC-3M | 03CH02-CB | 1GHz ~18GHz | Mar. 26, 2022 | Mar. 25, 2023 | Radiation (03CH02-CB) |
| Horn Antenna | EMCO | 3115 | 9610-4976 | 1GHz ~ 18GHz | Apr. 19, 2022 | Apr. 18, 2023 | Radiation (03CH02-CB) |
| Horn Antenna | Schwarzbeck | BBHA 9170 | BBHA9170252 | 15GHz ~ 40GHz | Aug. 22, 2022 | Aug. 21, 2023 | Radiation (03CH02-CB) |
| Pre-Amplifier | Agilent | 83017A | MY39501305 | 1GHz ~ 26.5GHz | Jul. 01, 2022 | Jun. 30, 2023 | Radiation (03CH02-CB) |
| Spectrum analyzer | R&S | FSP | 100593 | 9kHz~40GHz | Apr. 08, 2022 | Apr. 07, 2023 | Radiation (03CH02-CB) |
| RF Cable-high | Woken | RG402 | High Cable-18 | 1GHz ~ 18GHz | Oct. 03, 2022 | Oct. 02, 2023 | Radiation (03CH02-CB) |
| RF Cable-high | Woken | RG402 | High Cable-18+19 | 1GHz ~ 18GHz | Oct. 03, 2022 | Oct. 02, 2023 | Radiation (03CH02-CB) |
| High Cable | Woken | WCA0929M | 40G#5+7 | 1GHz ~ 40 GHz | Dec. 14, 2021 | Dec. 13, 2022 | Radiation (03CH02-CB) |
| High Cable | Woken | WCA0929M | 40G#5+6 | 1GHz ~ 40 GHz | Dec. 07, 2022 | Dec. 06, 2023 | Radiation (03CH02-CB) |
| High Cable | Woken | WCA0929M | 40G#5 | 1GHz ~ 40 GHz | Dec. 08, 2021 | Dec. 07, 2022 | Radiation (03CH02-CB) |
| High Cable | Woken | WCA0929M | 40G#5 | 1GHz ~ 40 GHz | Dec. 07, 2022 | Dec. 06, 2023 | Radiation (03CH02-CB) |
| High Cable | Woken | WCA0929M | 40G#7 | 1GHz ~ 40 GHz | Dec. 14, 2021 | Dec. 13, 2022 | Radiation (03CH02-CB) |
| High Cable | Woken | WCA0929M | 40G#6 | 1GHz ~ 40 GHz | Dec. 07, 2022 | Dec. 06, 2023 | Radiation (03CH02-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Radiation (03CH02-CB) |
| Spectrum analyzer | R&S | FSV40 | 101028 | 9kHz~40GHz | Jan. 07, 2022 | Jan. 06, 2023 | Conducted (TH03-CB) |
| Spectrum analyzer | R&S | FSV40 | 101028 | 9kHz~40GHz | Dec. 30, 2022 | Dec. 29, 2023 | Conducted (TH03-CB) |
| Power Sensor | Anritsu | MA2411B | 1531344 | 300MHz~40GHz | Jul. 31, 2022 | Jul. 30, 2023 | Conducted (TH03-CB) |

| Instrument | Brand | Model No. | Serial No. | Characteristics | Calibration Date | Calibration Due Date | Remark |
|---|---|---|---|---|---|---|---|
| Power Meter | Anritsu | ML2495A | 1728002 | 300MHz~40GHz | Jul. 31, 2022 | Jul. 30, 2023 | Conducted (TH03-CB) |
| RF Cable-high | Woken | RG402 | High Cable-11 | 1 GHz –18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH03-CB) |
| RF Cable-high | Woken | RG402 | High Cable-12 | 1 GHz –18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH03-CB) |
| RF Cable-high | Woken | RG402 | High Cable-13 | 1 GHz –18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH03-CB) |
| RF Cable-high | Woken | RG402 | High Cable-14 | 1 GHz –18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH03-CB) |
| RF Cable-high | Woken | RG402 | High Cable-15 | 1 GHz –18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH03-CB) |
| Switch | SPTCB | SP-SWI | SWI-03 | 1 GHz –26.5 GHz | Oct. 04, 2022 | Oct. 03, 2023 | Conducted (TH03-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Conducted (TH03-CB) |

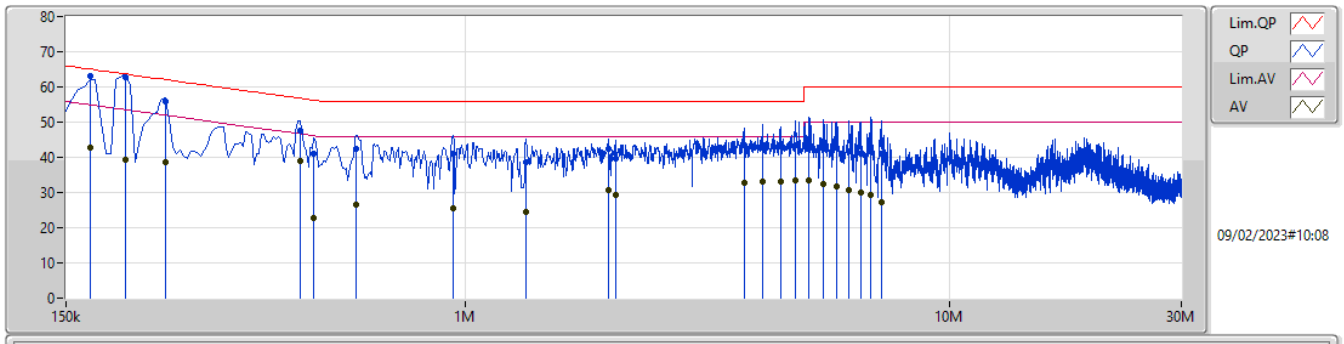
Note: Calibration Interval of instruments listed above is one year.

NCR means Non-Calibration required.

Summary

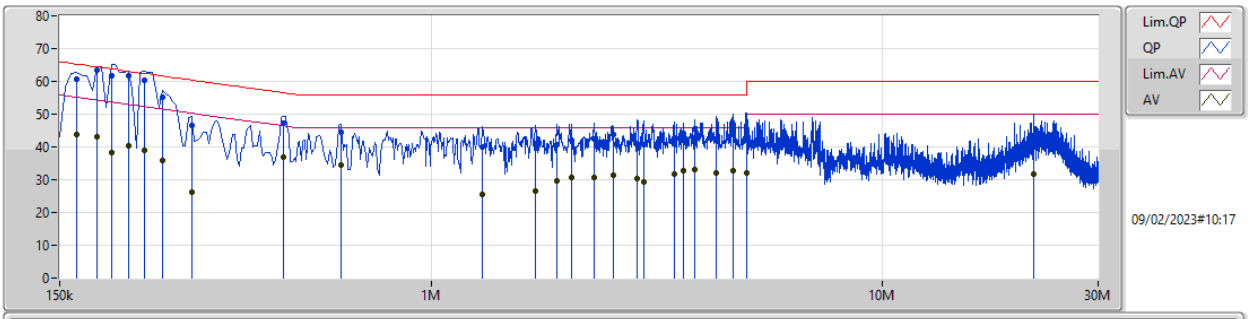
| Mode | Result | Type | Freq (Hz) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Condition |
|---|---|---|---|---|---|---|---|
| Mode 1 | Pass | QP | 181.5k | 63.40 | 64.41 | -1.01 | Neutral |

## Mode 1




| Type | Freq | Level | Limit | Margin | Factor | Condition | Comment | Raw | LISN | CL | AT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV) | (dBuV) | (dB) | (dB) | | | (dBuV) | (dB) | (dB) | (dB) |
| QP | 168k | 63.11 | 65.06 | -1.95 | 9.99 | Line | - | 53.12 | 0.06 | 0.04 | 9.89 |
| AV | 168k | 42.81 | 55.06 | -12.25 | 9.99 | Line | - | 32.82 | 0.06 | 0.04 | 9.89 |
| QP | 199.5k | 62.61 | 63.63 | -1.02 | 9.99 | Line | "Worst" | 52.62 | 0.06 | 0.04 | 9.89 |
| AV | 199.5k | 39.46 | 53.63 | -14.17 | 9.99 | Line | - | 29.47 | 0.06 | 0.04 | 9.89 |
| QP | 240k | 55.92 | 62.10 | -6.18 | 10.00 | Line | - | 45.92 | 0.06 | 0.05 | 9.89 |
| AV | 240k | 38.79 | 52.10 | -13.31 | 10.00 | Line | - | 28.79 | 0.06 | 0.05 | 9.89 |
| QP | 456k | 47.55 | 56.76 | -9.21 | 10.01 | Line | - | 37.54 | 0.06 | 0.06 | 9.89 |
| AV | 456k | 38.95 | 46.76 | -7.81 | 10.01 | Line | - | 28.94 | 0.06 | 0.06 | 9.89 |
| QP | 487.5k | 41.14 | 56.21 | -15.07 | 10.01 | Line | - | 31.13 | 0.06 | 0.06 | 9.89 |
| AV | 487.5k | 22.64 | 46.21 | -23.57 | 10.01 | Line | - | 12.63 | 0.06 | 0.06 | 9.89 |
| QP | 595.5k | 42.41 | 56.00 | -13.59 | 10.00 | Line | - | 32.41 | 0.06 | 0.05 | 9.89 |
| AV | 595.5k | 26.65 | 46.00 | -19.35 | 10.00 | Line | - | 16.65 | 0.06 | 0.05 | 9.89 |
| QP | 942k | 41.04 | 56.00 | -14.96 | 10.00 | Line | - | 31.04 | 0.07 | 0.04 | 9.89 |
| AV | 942k | 25.42 | 46.00 | -20.58 | 10.00 | Line | - | 15.42 | 0.07 | 0.04 | 9.89 |
| QP | 1.334M | 38.64 | 56.00 | -17.36 | 10.03 | Line | - | 28.61 | 0.08 | 0.06 | 9.89 |
| AV | 1.334M | 24.44 | 46.00 | -21.56 | 10.03 | Line | - | 14.41 | 0.08 | 0.06 | 9.89 |
| QP | 1.973M | 42.50 | 56.00 | -13.50 | 10.07 | Line | - | 32.43 | 0.09 | 0.09 | 9.89 |
| AV | 1.973M | 30.73 | 46.00 | -15.27 | 10.07 | Line | - | 20.66 | 0.09 | 0.09 | 9.89 |
| QP | 2.04M | 39.80 | 56.00 | -16.20 | 10.07 | Line | - | 29.73 | 0.09 | 0.09 | 9.89 |
| AV | 2.04M | 29.44 | 46.00 | -16.56 | 10.07 | Line | - | 19.37 | 0.09 | 0.09 | 9.89 |
| QP | 3.755M | 43.40 | 56.00 | -12.60 | 10.11 | Line | - | 33.29 | 0.12 | 0.10 | 9.89 |
| AV | 3.755M | 32.91 | 46.00 | -13.09 | 10.11 | Line | - | 22.80 | 0.12 | 0.10 | 9.89 |
| QP | 4.101M | 43.26 | 56.00 | -12.74 | 10.11 | Line | - | 33.15 | 0.12 | 0.10 | 9.89 |
| AV | 4.101M | 33.07 | 46.00 | -12.93 | 10.11 | Line | - | 22.96 | 0.12 | 0.10 | 9.89 |
| QP | 4.47M | 43.87 | 56.00 | -12.13 | 10.13 | Line | - | 33.74 | 0.13 | 0.11 | 9.89 |
| AV | 4.47M | 33.27 | 46.00 | -12.73 | 10.13 | Line | - | 23.14 | 0.13 | 0.11 | 9.89 |
| QP | 4.803M | 43.31 | 56.00 | -12.69 | 10.14 | Line | - | 33.17 | 0.14 | 0.11 | 9.89 |
| AV | 4.803M | 33.58 | 46.00 | -12.42 | 10.14 | Line | - | 23.44 | 0.14 | 0.11 | 9.89 |
| QP | 5.114M | 44.36 | 60.00 | -15.64 | 10.17 | Line | - | 34.19 | 0.15 | 0.12 | 9.90 |
| AV | 5.114M | 33.40 | 50.00 | -16.60 | 10.17 | Line | - | 23.23 | 0.15 | 0.12 | 9.90 |
| QP | 5.483M | 42.64 | 60.00 | -17.36 | 10.17 | Line | - | 32.47 | 0.15 | 0.12 | 9.90 |
| AV | 5.483M | 32.38 | 50.00 | -17.62 | 10.17 | Line | - | 22.21 | 0.15 | 0.12 | 9.90 |
| QP | 5.838M | 42.62 | 60.00 | -17.38 | 10.18 | Line | - | 32.44 | 0.16 | 0.12 | 9.90 |
| AV | 5.838M | 31.74 | 50.00 | -18.26 | 10.18 | Line | - | 21.56 | 0.16 | 0.12 | 9.90 |
| QP | 6.189M | 41.68 | 60.00 | -18.32 | 10.20 | Line | - | 31.48 | 0.17 | 0.13 | 9.90 |
| AV | 6.189M | 30.77 | 50.00 | -19.23 | 10.20 | Line | - | 20.57 | 0.17 | 0.13 | 9.90 |
| QP | 6.531M | 40.97 | 60.00 | -19.03 | 10.20 | Line | - | 30.77 | 0.17 | 0.13 | 9.90 |
| AV | 6.531M | 30.06 | 50.00 | -19.94 | 10.20 | Line | - | 19.86 | 0.17 | 0.13 | 9.90 |
| QP | 6.851M | 41.56 | 60.00 | -18.44 | 10.22 | Line | - | 31.34 | 0.18 | 0.14 | 9.90 |
| AV | 6.851M | 29.31 | 50.00 | -20.69 | 10.22 | Line | - | 19.09 | 0.18 | 0.14 | 9.90 |
| QP | 7.211M | 41.17 | 60.00 | -18.83 | 10.22 | Line | - | 30.95 | 0.18 | 0.14 | 9.90 |
| AV | 7.211M | 27.35 | 50.00 | -22.65 | 10.22 | Line | - | 17.13 | 0.18 | 0.14 | 9.90 |

**Mode 1**




| Type | Freq | Level | Limit | Margin | Factor | Condition | Comment | Raw | LISN | CL | AT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV) | (dBuV) | (dB) | (dB) | | | (dBuV) | (dB) | (dB) | (dB) |
| QP | 163.5k | 60.75 | 65.27 | -4.52 | 10.00 | Neutral | - | 50.75 | 0.07 | 0.04 | 9.89 |
| AV | 163.5k | 43.63 | 55.27 | -11.64 | 10.00 | Neutral | - | 33.63 | 0.07 | 0.04 | 9.89 |
| QP | 181.5k | 63.40 | 64.41 | -1.01 | 10.00 | Neutral | "Worst" | 53.40 | 0.07 | 0.04 | 9.89 |
| AV | 181.5k | 43.08 | 54.41 | -11.33 | 10.00 | Neutral | - | 33.08 | 0.07 | 0.04 | 9.89 |
| QP | 195k | 61.58 | 63.82 | -2.24 | 10.00 | Neutral | - | 51.58 | 0.07 | 0.04 | 9.89 |
| AV | 195k | 38.32 | 53.82 | -15.50 | 10.00 | Neutral | - | 28.32 | 0.07 | 0.04 | 9.89 |
| QP | 213k | 61.74 | 63.09 | -1.35 | 10.00 | Neutral | - | 51.74 | 0.07 | 0.04 | 9.89 |
| AV | 213k | 40.47 | 53.09 | -12.62 | 10.00 | Neutral | - | 30.47 | 0.07 | 0.04 | 9.89 |
| QP | 231k | 60.33 | 62.41 | -2.08 | 10.00 | Neutral | - | 50.33 | 0.07 | 0.04 | 9.89 |
| AV | 231k | 38.99 | 52.41 | -13.42 | 10.00 | Neutral | - | 28.99 | 0.07 | 0.04 | 9.89 |
| QP | 253.5k | 55.16 | 61.64 | -6.48 | 10.01 | Neutral | - | 45.15 | 0.07 | 0.05 | 9.89 |
| AV | 253.5k | 35.80 | 51.64 | -15.84 | 10.01 | Neutral | - | 25.79 | 0.07 | 0.05 | 9.89 |
| QP | 294k | 46.44 | 60.42 | -13.98 | 10.01 | Neutral | - | 36.43 | 0.07 | 0.05 | 9.89 |
| AV | 294k | 26.27 | 50.42 | -24.15 | 10.01 | Neutral | - | 16.26 | 0.07 | 0.05 | 9.89 |
| QP | 469.5k | 47.41 | 56.52 | -9.11 | 10.02 | Neutral | - | 37.39 | 0.07 | 0.06 | 9.89 |
| AV | 469.5k | 36.82 | 46.52 | -9.70 | 10.02 | Neutral | - | 26.80 | 0.07 | 0.06 | 9.89 |
| QP | 631.5k | 44.36 | 56.00 | -11.64 | 10.01 | Neutral | - | 34.35 | 0.07 | 0.05 | 9.89 |
| AV | 631.5k | 34.48 | 46.00 | -11.52 | 10.01 | Neutral | - | 24.47 | 0.07 | 0.05 | 9.89 |
| QP | 1.298M | 40.07 | 56.00 | -15.93 | 10.04 | Neutral | - | 30.03 | 0.09 | 0.06 | 9.89 |
| AV | 1.298M | 25.36 | 46.00 | -20.64 | 10.04 | Neutral | - | 15.32 | 0.09 | 0.06 | 9.89 |
| QP | 1.698M | 41.19 | 56.00 | -14.81 | 10.07 | Neutral | - | 31.12 | 0.10 | 0.08 | 9.89 |
| AV | 1.698M | 26.48 | 46.00 | -19.52 | 10.07 | Neutral | - | 16.41 | 0.10 | 0.08 | 9.89 |
| QP | 1.896M | 40.78 | 56.00 | -15.22 | 10.08 | Neutral | - | 30.70 | 0.10 | 0.09 | 9.89 |
| AV | 1.896M | 29.54 | 46.00 | -16.46 | 10.08 | Neutral | - | 19.46 | 0.10 | 0.09 | 9.89 |
| QP | 2.045M | 42.19 | 56.00 | -13.81 | 10.08 | Neutral | - | 32.11 | 0.10 | 0.09 | 9.89 |
| AV | 2.045M | 30.73 | 46.00 | -15.27 | 10.08 | Neutral | - | 20.65 | 0.10 | 0.09 | 9.89 |
| QP | 2.292M | 42.27 | 56.00 | -13.73 | 10.09 | Neutral | - | 32.18 | 0.11 | 0.09 | 9.89 |
| AV | 2.292M | 30.80 | 46.00 | -15.20 | 10.09 | Neutral | - | 20.71 | 0.11 | 0.09 | 9.89 |
| QP | 2.522M | 43.95 | 56.00 | -12.05 | 10.09 | Neutral | - | 33.86 | 0.11 | 0.09 | 9.89 |
| AV | 2.522M | 31.42 | 46.00 | -14.58 | 10.09 | Neutral | - | 21.33 | 0.11 | 0.09 | 9.89 |
| QP | 2.859M | 41.20 | 56.00 | -14.80 | 10.11 | Neutral | - | 31.09 | 0.12 | 0.10 | 9.89 |
| AV | 2.859M | 30.28 | 46.00 | -15.72 | 10.11 | Neutral | - | 20.17 | 0.12 | 0.10 | 9.89 |
| QP | 2.954M | 40.71 | 56.00 | -15.29 | 10.11 | Neutral | - | 30.60 | 0.12 | 0.10 | 9.89 |
| AV | 2.954M | 29.37 | 46.00 | -16.63 | 10.11 | Neutral | - | 19.26 | 0.12 | 0.10 | 9.89 |
| QP | 3.449M | 42.63 | 56.00 | -13.37 | 10.11 | Neutral | - | 32.52 | 0.12 | 0.10 | 9.89 |
| AV | 3.449M | 31.89 | 46.00 | -14.11 | 10.11 | Neutral | - | 21.78 | 0.12 | 0.10 | 9.89 |
| QP | 3.611M | 44.00 | 56.00 | -12.00 | 10.12 | Neutral | - | 33.88 | 0.13 | 0.10 | 9.89 |
| AV | 3.611M | 32.90 | 46.00 | -13.10 | 10.12 | Neutral | - | 22.78 | 0.13 | 0.10 | 9.89 |
| QP | 3.836M | 45.36 | 56.00 | -10.64 | 10.12 | Neutral | - | 35.24 | 0.13 | 0.10 | 9.89 |
| AV | 3.836M | 33.21 | 46.00 | -12.79 | 10.12 | Neutral | - | 23.09 | 0.13 | 0.10 | 9.89 |
| QP | 4.286M | 42.13 | 56.00 | -13.87 | 10.13 | Neutral | - | 32.00 | 0.14 | 0.10 | 9.89 |
| AV | 4.286M | 32.15 | 46.00 | -13.85 | 10.13 | Neutral | - | 22.02 | 0.14 | 0.10 | 9.89 |
| QP | 4.65M | 44.99 | 56.00 | -11.01 | 10.15 | Neutral | - | 34.84 | 0.15 | 0.11 | 9.89 |
| AV | 4.65M | 32.93 | 46.00 | -13.07 | 10.15 | Neutral | - | 22.78 | 0.15 | 0.11 | 9.89 |
| QP | 4.983M | 42.12 | 56.00 | -13.88 | 10.16 | Neutral | - | 31.96 | 0.16 | 0.11 | 9.89 |
| AV | 4.983M | 32.09 | 46.00 | -13.91 | 10.16 | Neutral | - | 21.93 | 0.16 | 0.11 | 9.89 |
| QP | 21.642M | 41.59 | 60.00 | -18.41 | 10.50 | Neutral | - | 31.09 | 0.30 | 0.24 | 9.96 |
| AV | 21.642M | 31.85 | 50.00 | -18.15 | 10.50 | Neutral | - | 21.35 | 0.30 | 0.24 | 9.96 |

Summary

| Mode | Max-N dB (Hz) | Max-OBW (Hz) | ITU-Code | Min-N dB (Hz) | Min-OBW (Hz) |
|---|---|---|---|---|---|
| 2.4-2.4835GHz | - | - | - | - | - |
| BT-BR(1Mbps) | 938.75k | 882.059k | 882KF1D | 935k | 877.061k |
| BT-EDR(2Mbps) | 1.314M | 1.186M | 1M19G1D | 1.31M | 1.184M |
| BT-EDR(3Mbps) | 1.271M | 1.189M | 1M19G1D | 1.261M | 1.186M |

Max-N dB = Maximum 20dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 20dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

Result

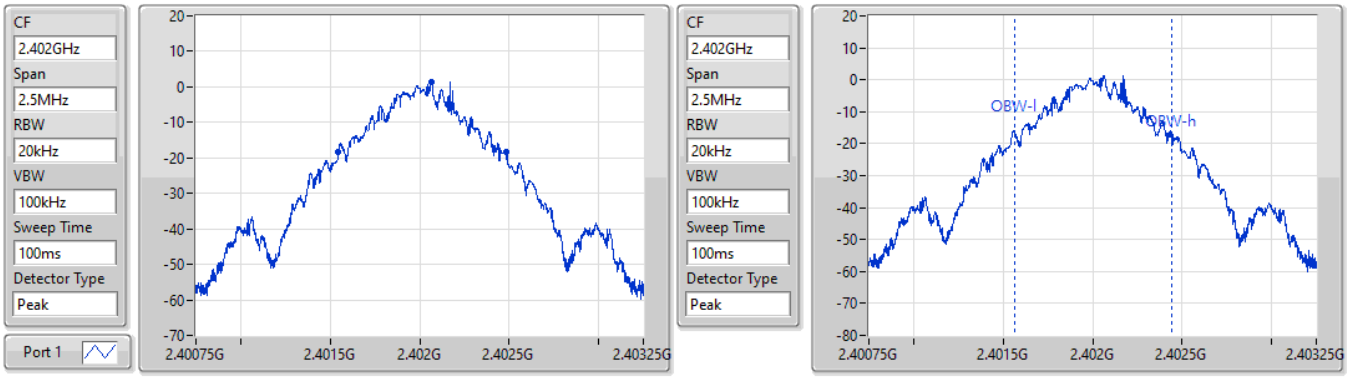
| Mode | Result | Limit (Hz) | Port 1-N dB (Hz) | Port 1-OBW (Hz) |
|---|---|---|---|---|
| BT-BR(1Mbps) | - | - | - | - |
| 2402MHz | Pass | Inf | 935k | 879.56k |
| 2440MHz | Pass | Inf | 937.5k | 877.061k |
| 2480MHz | Pass | Inf | 938.75k | 882.059k |
| BT-EDR(2Mbps) | - | - | - | - |
| 2402MHz | Pass | Inf | 1.314M | 1.186M |
| 2440MHz | Pass | Inf | 1.31M | 1.184M |
| 2480MHz | Pass | Inf | 1.313M | 1.186M |
| BT-EDR(3Mbps) | - | - | - | - |
| 2402MHz | Pass | Inf | 1.271M | 1.186M |
| 2440MHz | Pass | Inf | 1.268M | 1.189M |
| 2480MHz | Pass | Inf | 1.261M | 1.188M |

Port X-N dB = Port X 20dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

## BT-BR(1Mbps) EBW-FS

### 2402MHz

15/11/2022

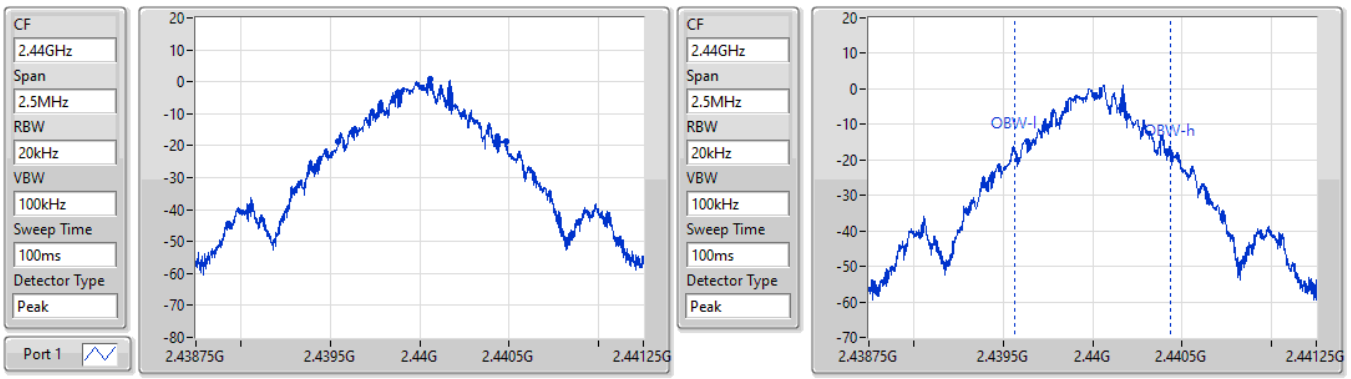



| 20dB(Hz) | Fl-20dB(Hz) | Fh-20dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---|---|---|---|---|---|---|---|
| 935k | 2.401546G | 2.402481G | 879.56k | 2.401563G | 2.402442G | Inf | 1 |

## BT-BR(1Mbps) EBW-FS

### 2440MHz

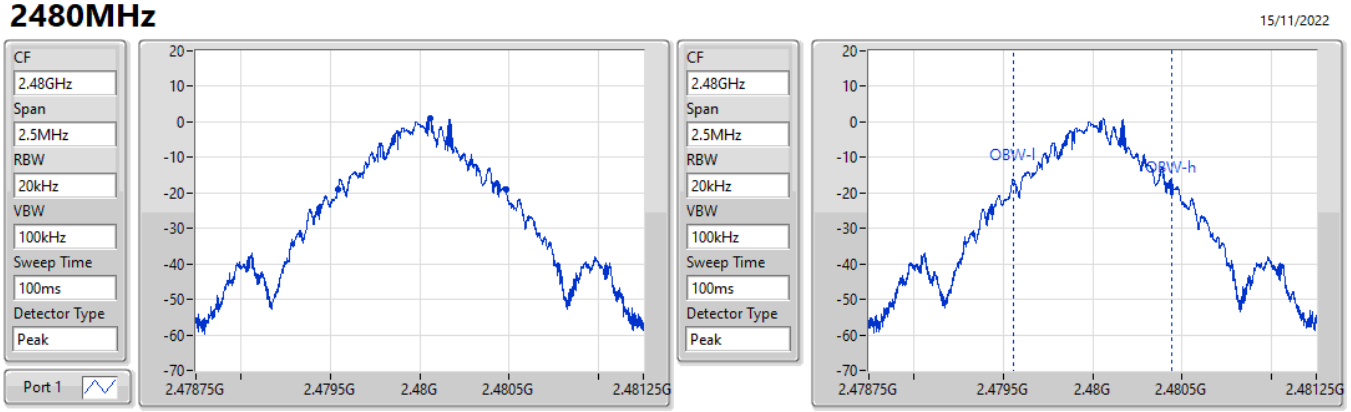
15/11/2022




| 20dB(Hz) | Fl-20dB(Hz) | Fh-20dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---|---|---|---|---|---|---|---|
| 937.5k | 2.439544G | 2.440481G | 877.061k | 2.439561G | 2.440439G | Inf | 1 |

## BT-BR(1Mbps) EBW-FS

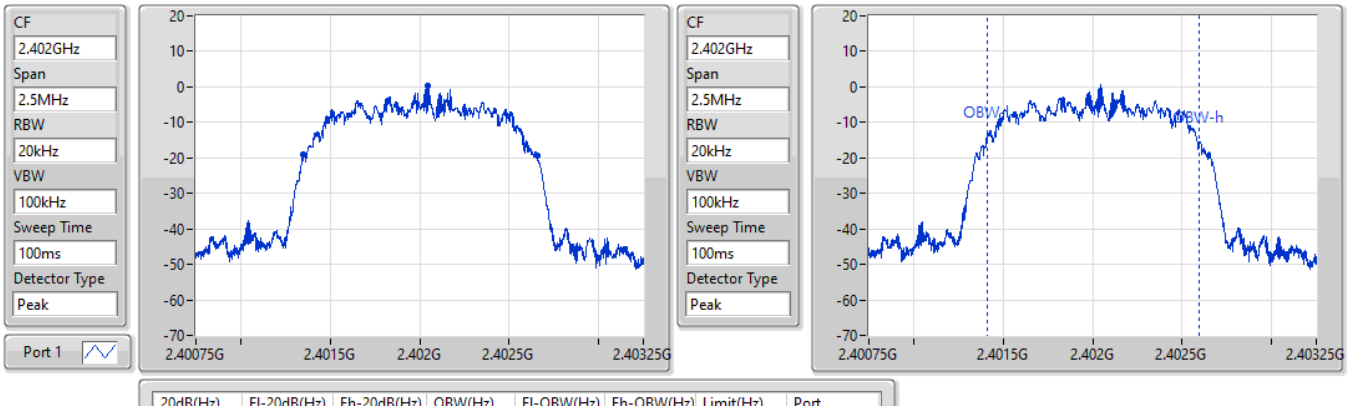
### 2480MHz




| 20dB(Hz) | Fl-20dB(Hz) | Fh-20dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---|---|---|---|---|---|---|---|
| 938.75k | 2.479543G | 2.480481G | 882.059k | 2.479559G | 2.480441G | Inf | 1 |

## BT-EDR(2Mbps) EBW-FS

### 2402MHz

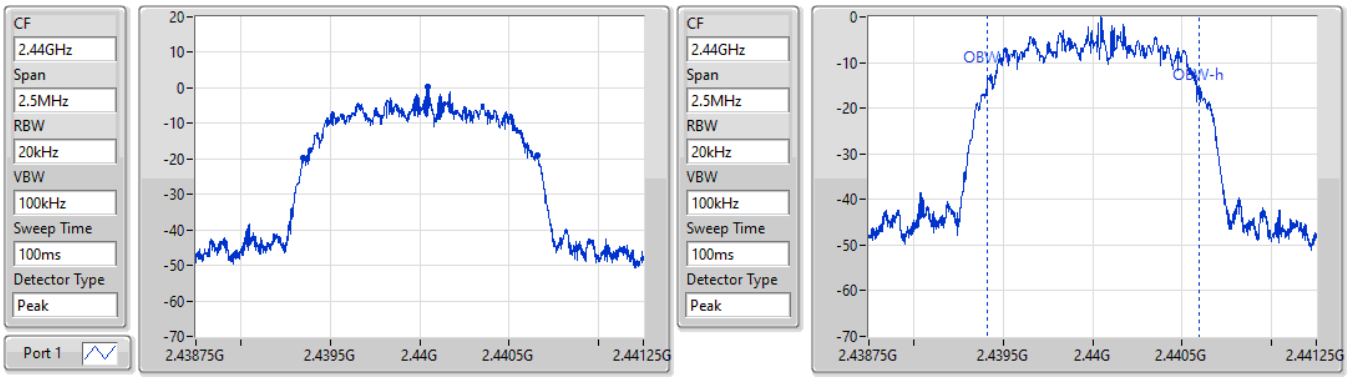



| 20dB(Hz) | Fl-20dB(Hz) | Fh-20dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---|---|---|---|---|---|---|---|
| 1.314M | 2.401346G | 2.40266G | 1.186M | 2.401409G | 2.402595G | Inf | 1 |

## BT-EDR(2Mbps) EBW-FS

### 2440MHz

15/11/2022

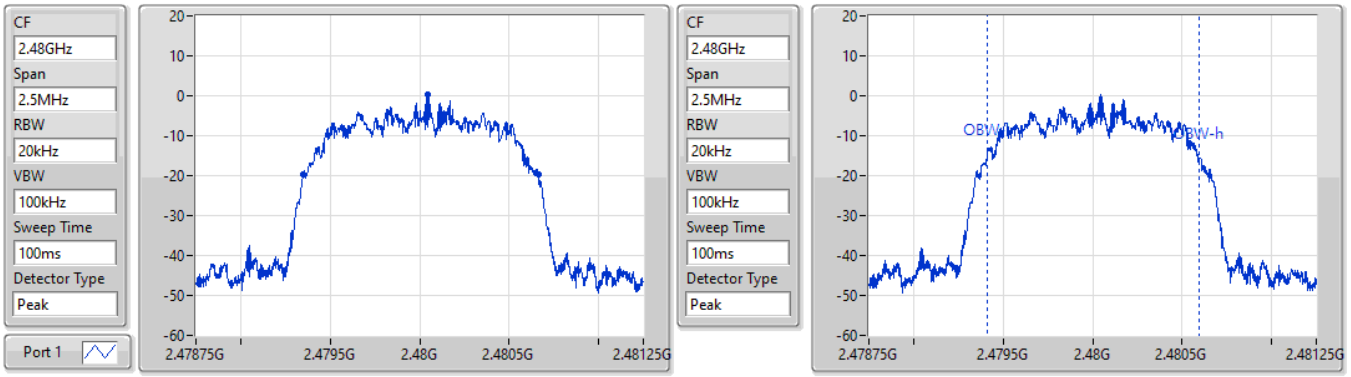



| 20dB(Hz) | Fl-20dB(Hz) | Fh-20dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---|---|---|---|---|---|---|---|
| 1.31M | 2.439348G | 2.440658G | 1.184M | 2.439412G | 2.440596G | Inf | 1 |

## BT-EDR(2Mbps) EBW-FS

### 2480MHz

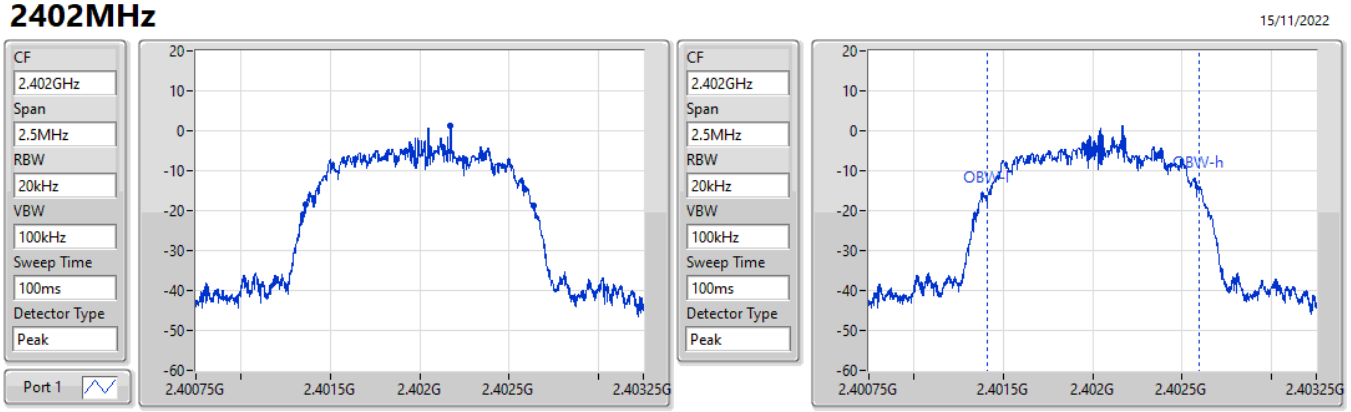
15/11/2022




| 20dB(Hz) | Fl-20dB(Hz) | Fh-20dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---|---|---|---|---|---|---|---|
| 1.313M | 2.47935G | 2.480663G | 1.186M | 2.479413G | 2.480598G | Inf | 1 |

## BT-EDR(3Mbps) EBW-FS

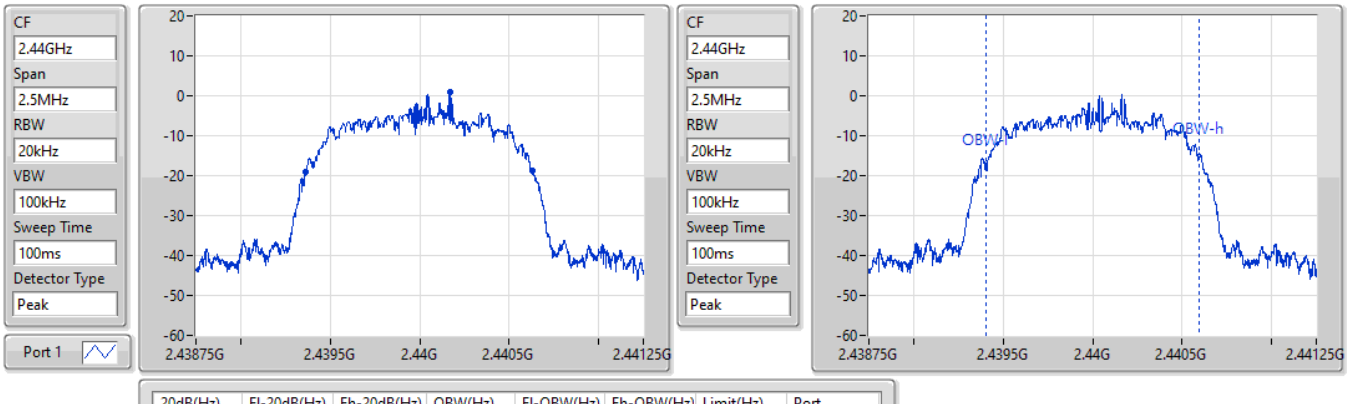
### 2402MHz




| 20dB(Hz) | Fl-20dB(Hz) | Fh-20dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---|---|---|---|---|---|---|---|
| 1.271M | 2.401364G | 2.402635G | 1.186M | 2.401409G | 2.402595G | Inf | 1 |

## BT-EDR(3Mbps) EBW-FS

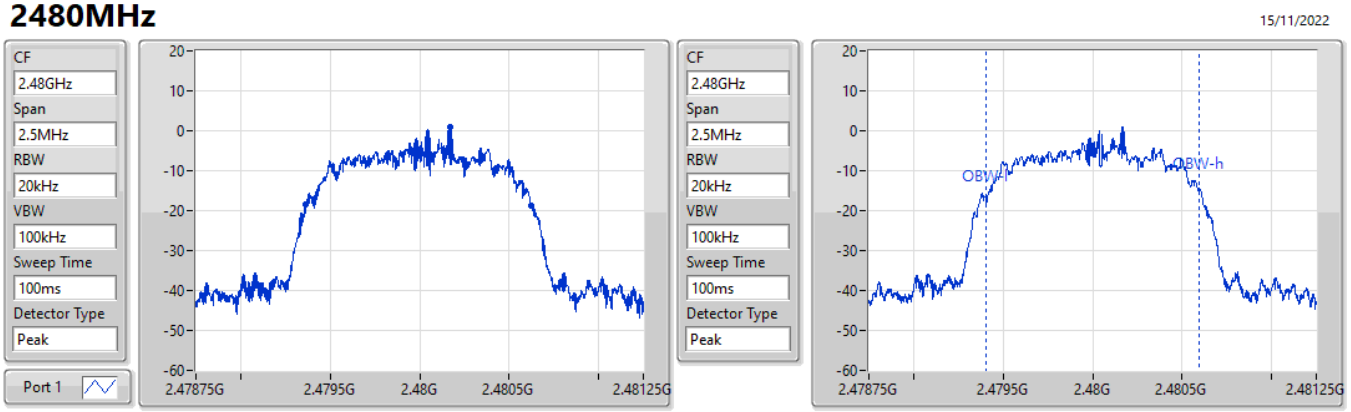
### 2440MHz




| 20dB(Hz) | Fl-20dB(Hz) | Fh-20dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---|---|---|---|---|---|---|---|
| 1.268M | 2.439361G | 2.440629G | 1.189M | 2.439405G | 2.440595G | Inf | 1 |

**BT-EDR(3Mbps)** **EBW-FS**

**2480MHz**




| 20dB(Hz) | Fl-20dB(Hz) | Fh-20dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---|---|---|---|---|---|---|---|
| 1.261M | 2.479365G | 2.480626G | 1.188M | 2.479405G | 2.480593G | Inf | 1 |

Summary

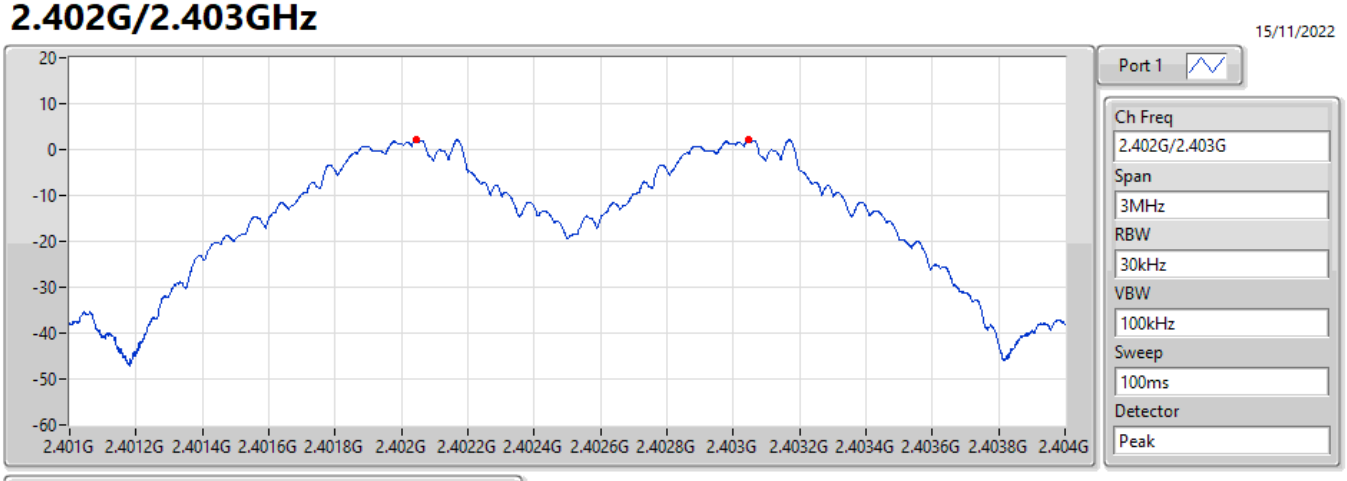
| Mode | Max-Space (Hz) | Min-Space (Hz) |
|---|---|---|
| 2.4-2.4835GHz | - | - |
| BT-BR(1Mbps) | 1.002M | 999k |
| BT-EDR(2Mbps) | 1.0005M | 999k |
| BT-EDR(3Mbps) | 1.0035M | 1.0005M |

Result

| Mode | Result | Fl (Hz) | Fh (Hz) | Ch.Space (Hz) | Limit (Hz) |
|---|---|---|---|---|---|
| BT-BR(1Mbps) | - | - | - | - | - |
| 2402MHz | Pass | 2.402044G | 2.403046G | 1.002M | 622.71k |
| 2440MHz | Pass | 2.440044G | 2.441043G | 999k | 624.375k |
| 2480MHz | Pass | 2.479044G | 2.480046G | 1.002M | 625.2075k |
| BT-EDR(2Mbps) | - | - | - | - | - |
| 2402MHz | Pass | 2.402043G | 2.403042G | 999k | 875.124k |
| 2440MHz | Pass | 2.440046G | 2.441046G | 1.0005M | 872.46k |
| 2480MHz | Pass | 2.479047G | 2.480048G | 1.0005M | 874.458k |
| BT-EDR(3Mbps) | - | - | - | - | - |
| 2402MHz | Pass | 2.402043G | 2.403045G | 1.002M | 846.486k |
| 2440MHz | Pass | 2.440043G | 2.441043G | 1.0005M | 844.488k |
| 2480MHz | Pass | 2.479043G | 2.480046G | 1.0035M | 839.826k |

**BT-BR(1Mbps)** **Channel Separation-FS**

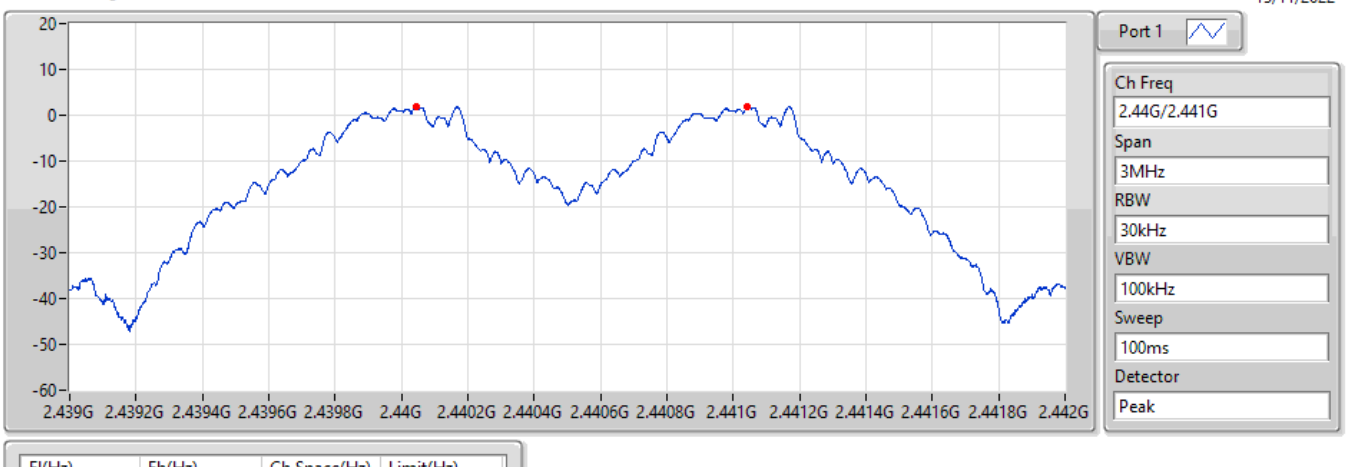
**2.402G/2.403GHz**




| Fl(Hz) | Fh(Hz) | Ch.Space(Hz) | Limit(Hz) |
|---|---|---|---|
| 2.402044G | 2.403046G | 1.002M | 622.71k |

**BT-BR(1Mbps)** **Channel Separation-FS**

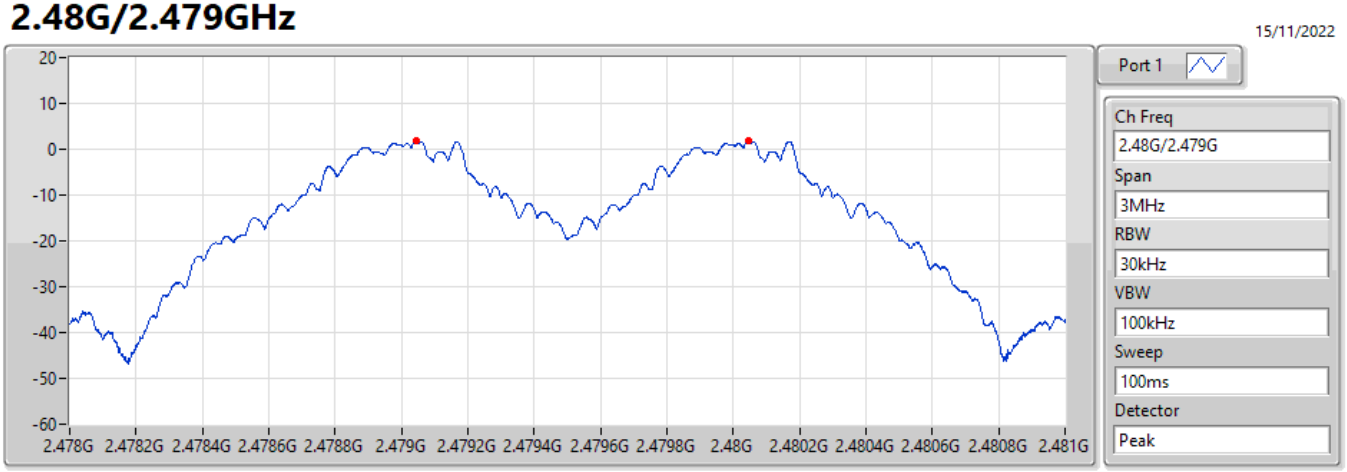
**2.44G/2.441GHz**




| Fl(Hz) | Fh(Hz) | Ch.Space(Hz) | Limit(Hz) |
|---|---|---|---|
| 2.440044G | 2.441043G | 999k | 624.375k |

## BT-BR(1Mbps) Channel Separation-FS

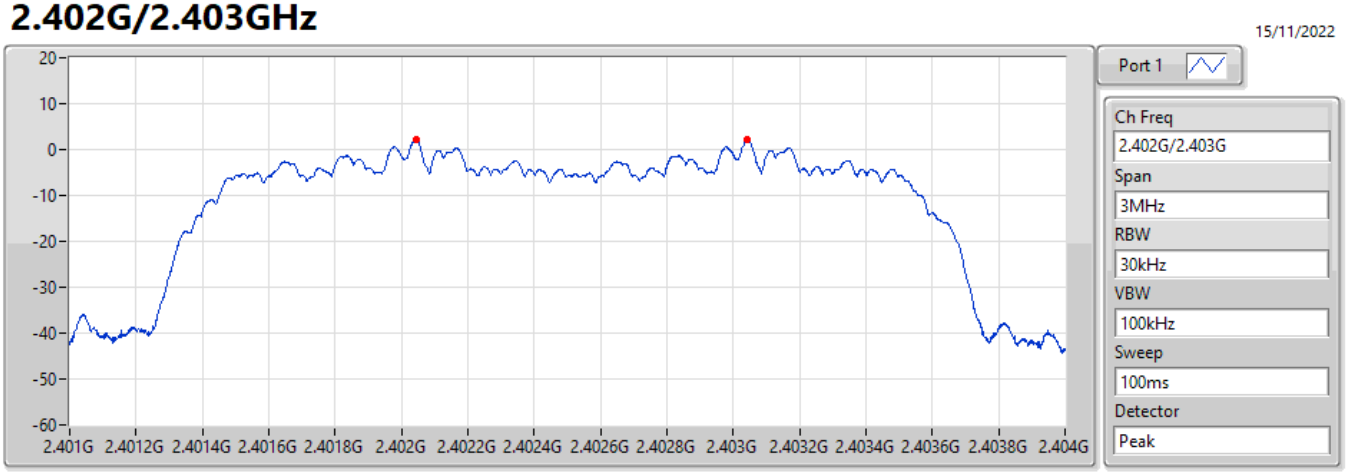
### 2.48G/2.479GHz




| Fl(Hz) | Fh(Hz) | Ch.Space(Hz) | Limit(Hz) |
|---|---|---|---|
| 2.479044G | 2.480046G | 1.002M | 625.2075k |

## BT-EDR(2Mbps) Channel Separation-FS

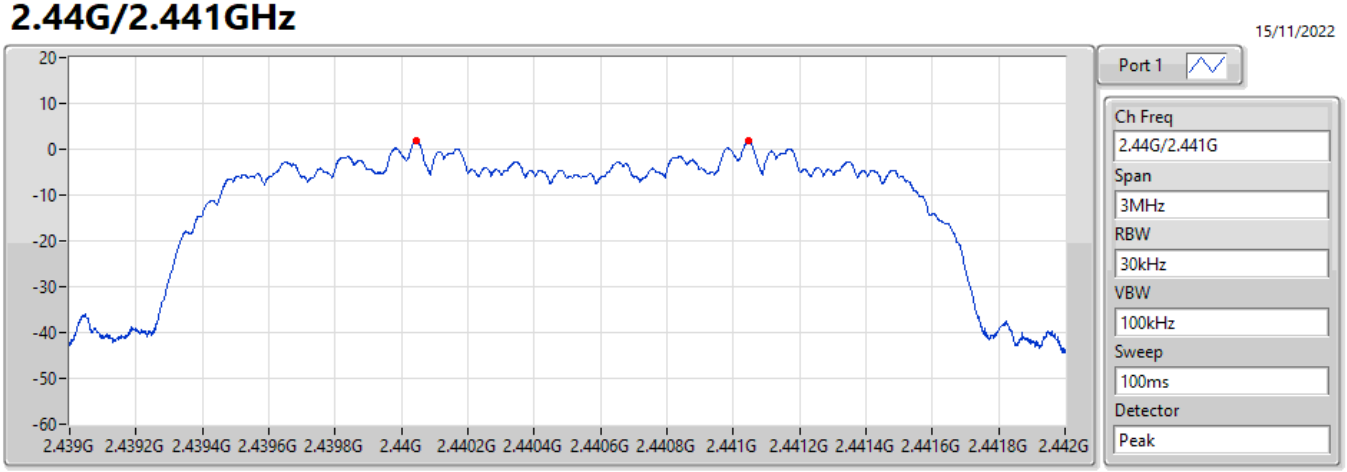
### 2.402G/2.403GHz




| Fl(Hz) | Fh(Hz) | Ch.Space(Hz) | Limit(Hz) |
|---|---|---|---|
| 2.402043G | 2.403042G | 999k | 875.124k |

**BT-EDR(2Mbps)** **Channel Separation-FS**

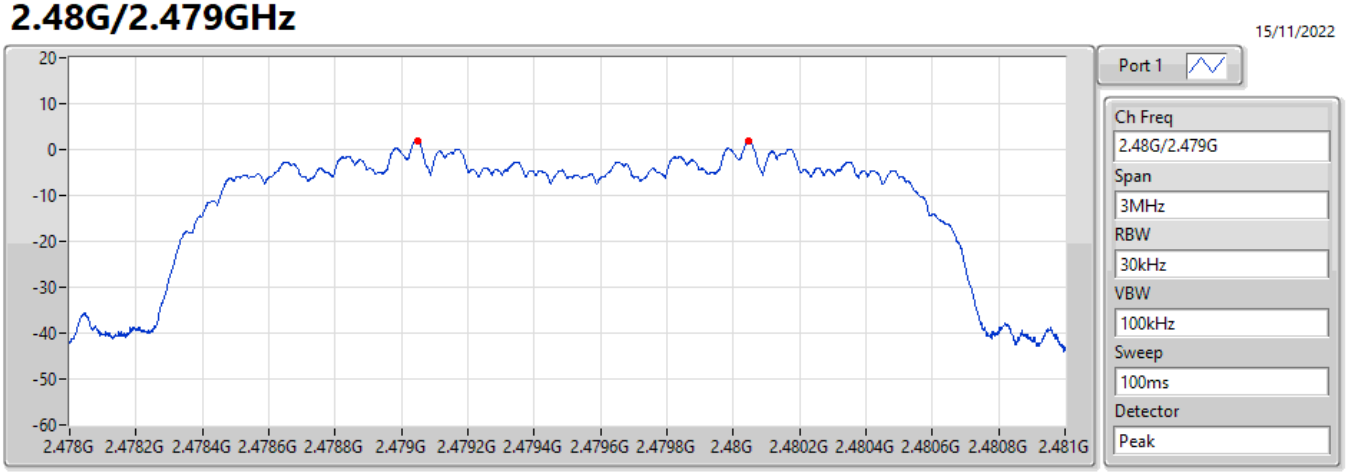
**2.44G/2.441GHz**




| Fl(Hz) | Fh(Hz) | Ch.Space(Hz) | Limit(Hz) |
|---|---|---|---|
| 2.440046G | 2.441046G | 1.0005M | 872.46k |

**BT-EDR(2Mbps)** **Channel Separation-FS**

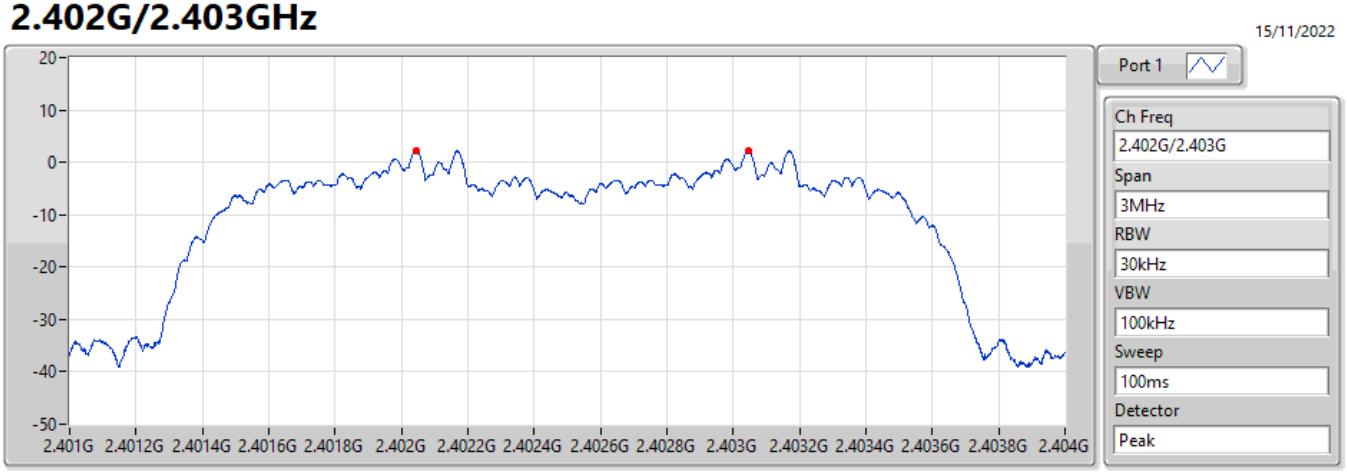
**2.48G/2.479GHz**




| Fl(Hz) | Fh(Hz) | Ch.Space(Hz) | Limit(Hz) |
|---|---|---|---|
| 2.479047G | 2.480048G | 1.0005M | 874.458k |

## BT-EDR(3Mbps) Channel Separation-FS

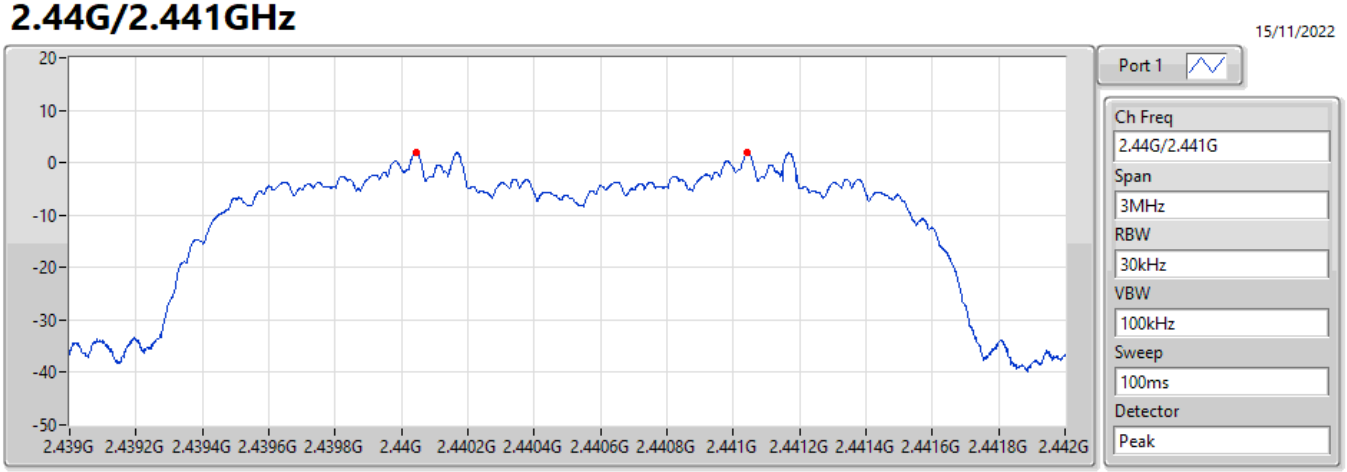
### 2.402G/2.403GHz




| Fl(Hz) | Fh(Hz) | Ch.Space(Hz) | Limit(Hz) |
|---|---|---|---|
| 2.402043G | 2.403045G | 1.002M | 846.486k |

## BT-EDR(3Mbps) Channel Separation-FS

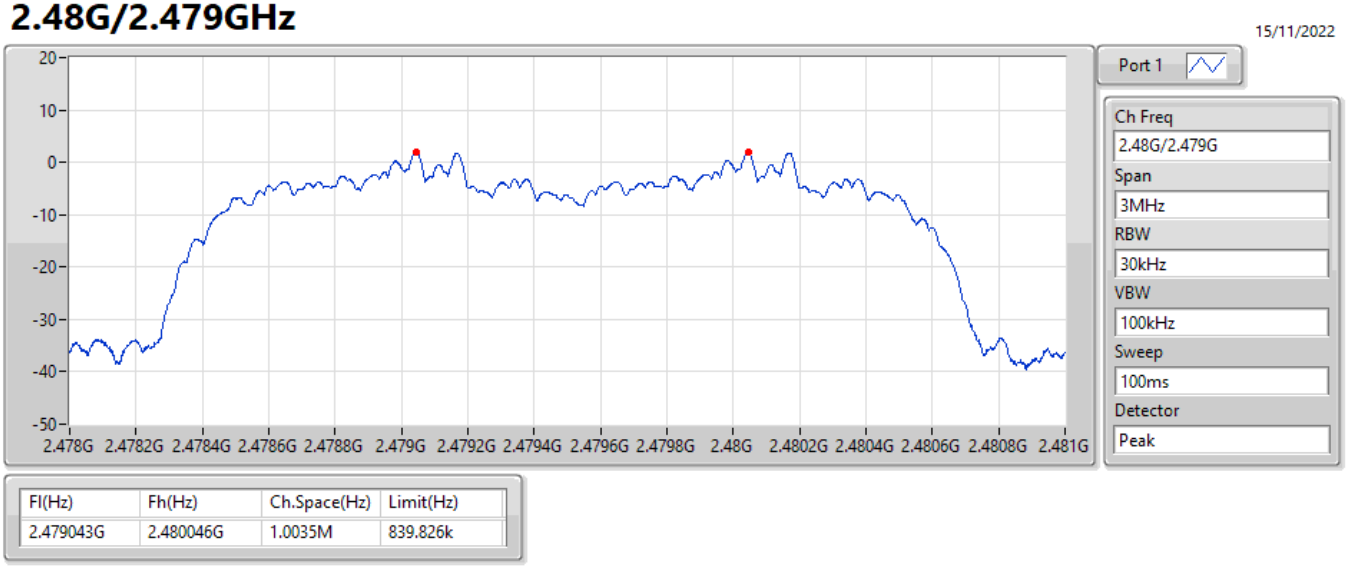
### 2.44G/2.441GHz




| Fl(Hz) | Fh(Hz) | Ch.Space(Hz) | Limit(Hz) |
|---|---|---|---|
| 2.440043G | 2.441043G | 1.0005M | 844.488k |

**BT-EDR(3Mbps)** **Channel Separation-FS**

**2.48G/2.479GHz**




| Fl(Hz) | Fh(Hz) | Ch.Space(Hz) | Limit(Hz) |
|---|---|---|---|
| 2.479043G | 2.480046G | 1.0035M | 839.826k |

Summary

| Mode | Power (dBm) | Power (W) |
|---|---|---|
| 2.4-2.4835GHz | - | - |
| BT-BR(1Mbps) | 4.54 | 0.00284 |
| BT-EDR(2Mbps) | 4.31 | 0.00270 |
| BT-EDR(3Mbps) | 4.32 | 0.00270 |

Result

| Mode | Result | Gain (dBi) | Power (dBm) | Power Limit (dBm) |
|---|---|---|---|---|
| BT-BR(1Mbps) | - | - | - | - |
| 2402MHz | Pass | 2.98 | 4.54 | 21.00 |
| 2440MHz | Pass | 2.98 | 4.19 | 21.00 |
| 2480MHz | Pass | 2.98 | 4.11 | 21.00 |
| BT-EDR(2Mbps) | - | - | - | - |
| 2402MHz | Pass | 2.98 | 4.31 | 21.00 |
| 2440MHz | Pass | 2.98 | 4.08 | 21.00 |
| 2480MHz | Pass | 2.98 | 4.03 | 21.00 |
| BT-EDR(3Mbps) | - | - | - | - |
| 2402MHz | Pass | 2.98 | 4.32 | 21.00 |
| 2440MHz | Pass | 2.98 | 4.03 | 21.00 |
| 2480MHz | Pass | 2.98 | 4.03 | 21.00 |

DG = Directional Gain; Port X = Port X output power

Summary

| Mode | Power (dBm) | Power (W) |
|---|---|---|
| 2.4-2.4835GHz | - | - |
| BT-BR(1Mbps) | 4.89 | 0.00308 |
| BT-EDR(2Mbps) | 6.98 | 0.00499 |
| BT-EDR(3Mbps) | 7.39 | 0.00548 |

Result

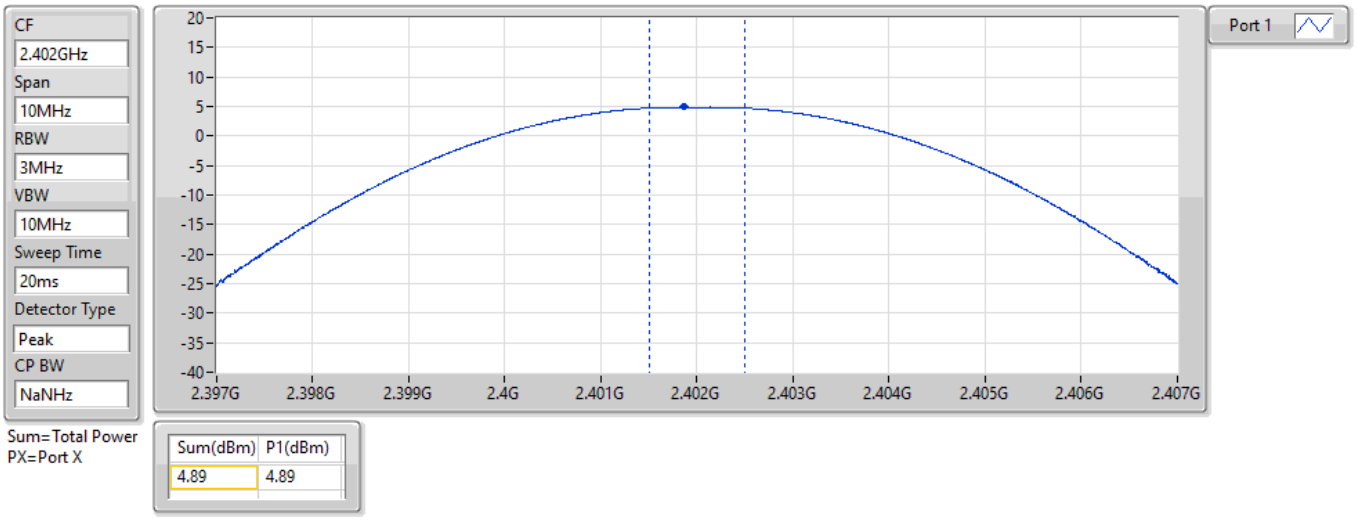
| Mode | Result | Gain (dBi) | Power (dBm) | Power Limit (dBm) |
|---|---|---|---|---|
| BT-BR(1Mbps) | - | - | - | - |
| 2402MHz | Pass | 2.98 | 4.89 | 21.00 |
| 2440MHz | Pass | 2.98 | 4.60 | 21.00 |
| 2480MHz | Pass | 2.98 | 4.52 | 21.00 |
| BT-EDR(2Mbps) | - | - | - | - |
| 2402MHz | Pass | 2.98 | 6.98 | 21.00 |
| 2440MHz | Pass | 2.98 | 6.68 | 21.00 |
| 2480MHz | Pass | 2.98 | 6.71 | 21.00 |
| BT-EDR(3Mbps) | - | - | - | - |
| 2402MHz | Pass | 2.98 | 7.39 | 21.00 |
| 2440MHz | Pass | 2.98 | 7.07 | 21.00 |
| 2480MHz | Pass | 2.98 | 7.01 | 21.00 |

DG = Directional Gain; Port X = Port X output power

**BT-BR(1Mbps)** **PK Power-FS**

**2402MHz**

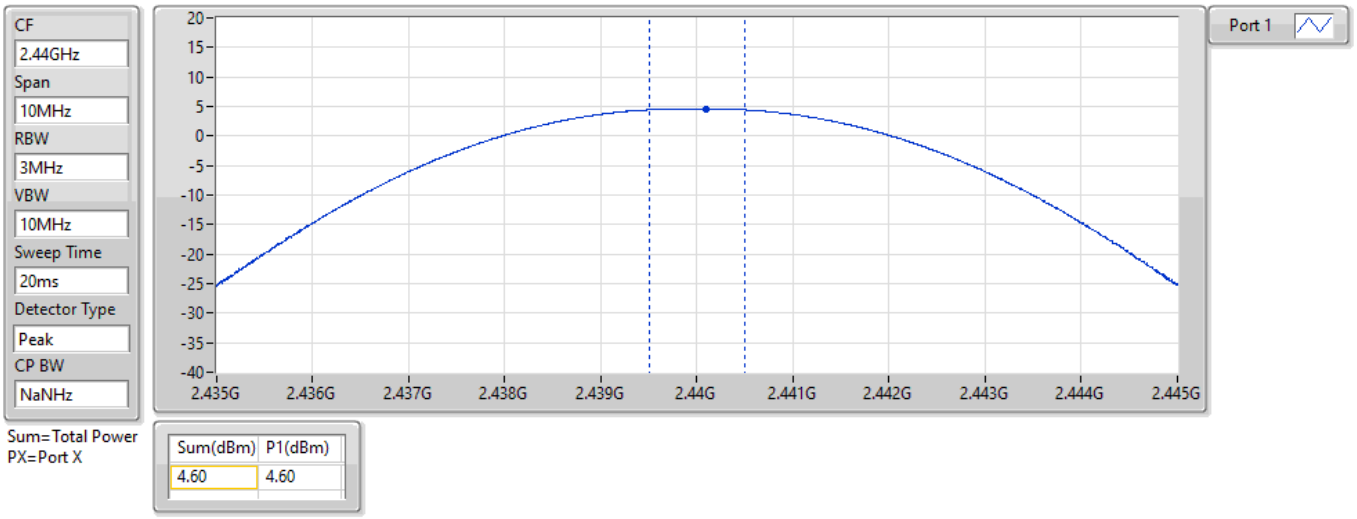
15/11/2022




**BT-BR(1Mbps)** **PK Power-FS**

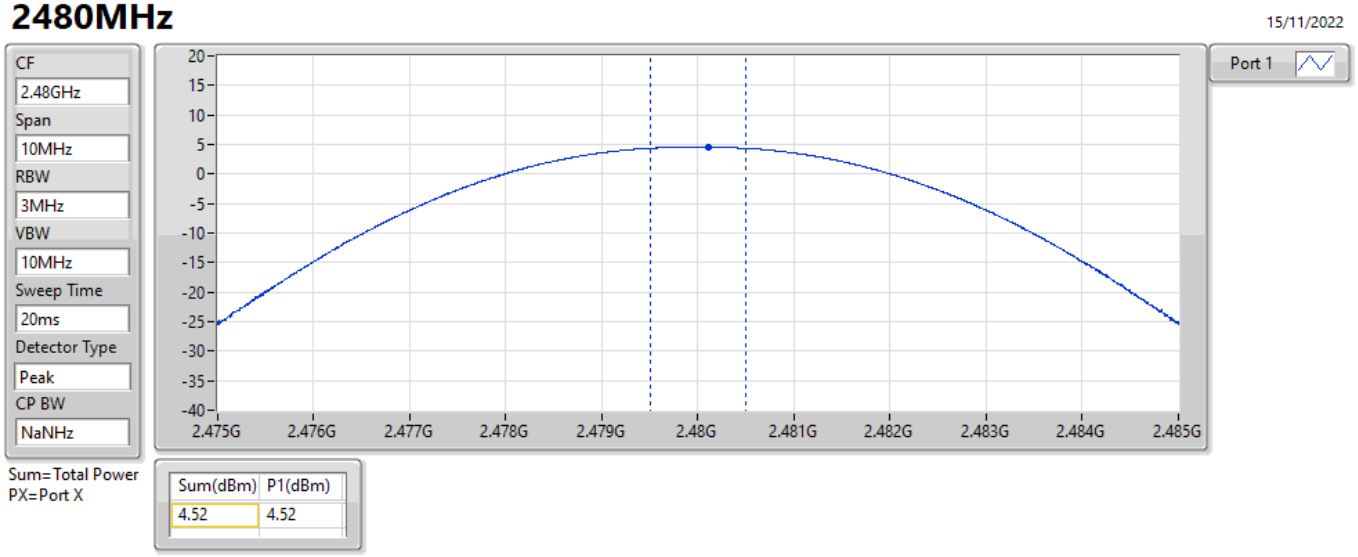
**2440MHz**

15/11/2022



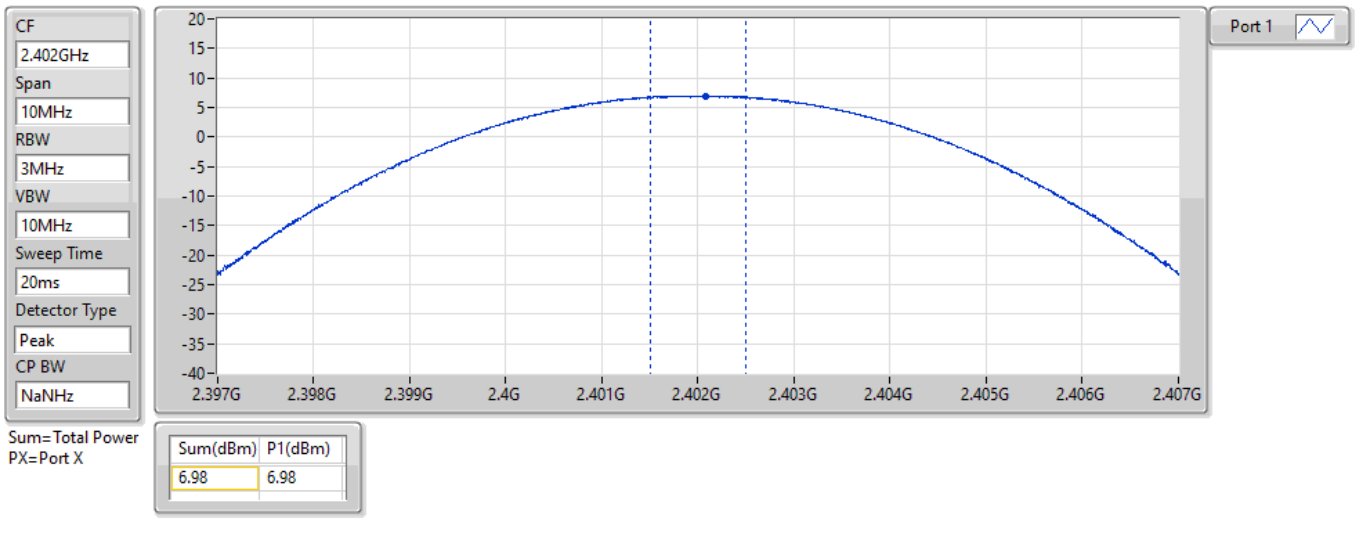
## BT-BR(1Mbps) PK Power-FS

### 2480MHz



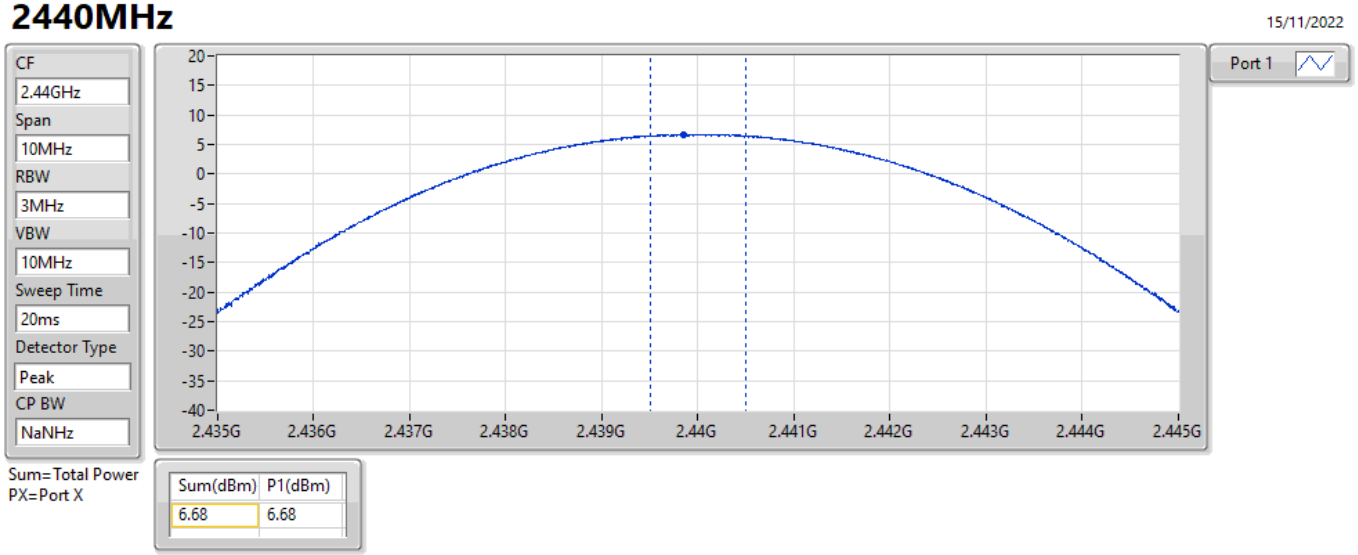

## BT-EDR(2Mbps) PK Power-FS

### 2402MHz



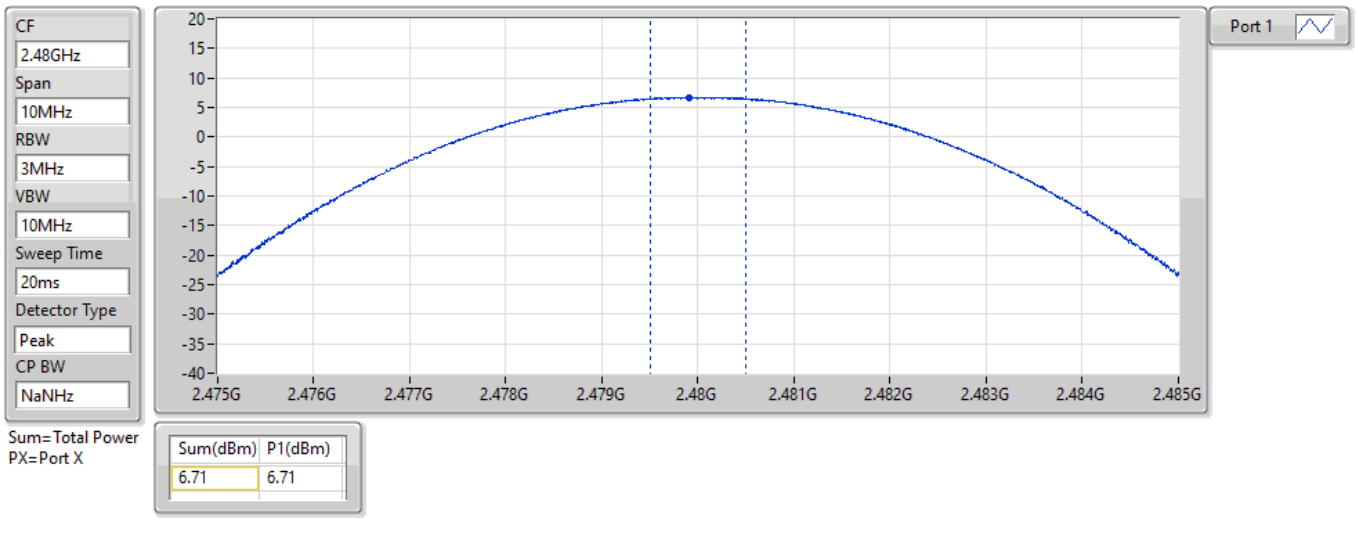
## BT-EDR(2Mbps) PK Power-FS

### 2440MHz



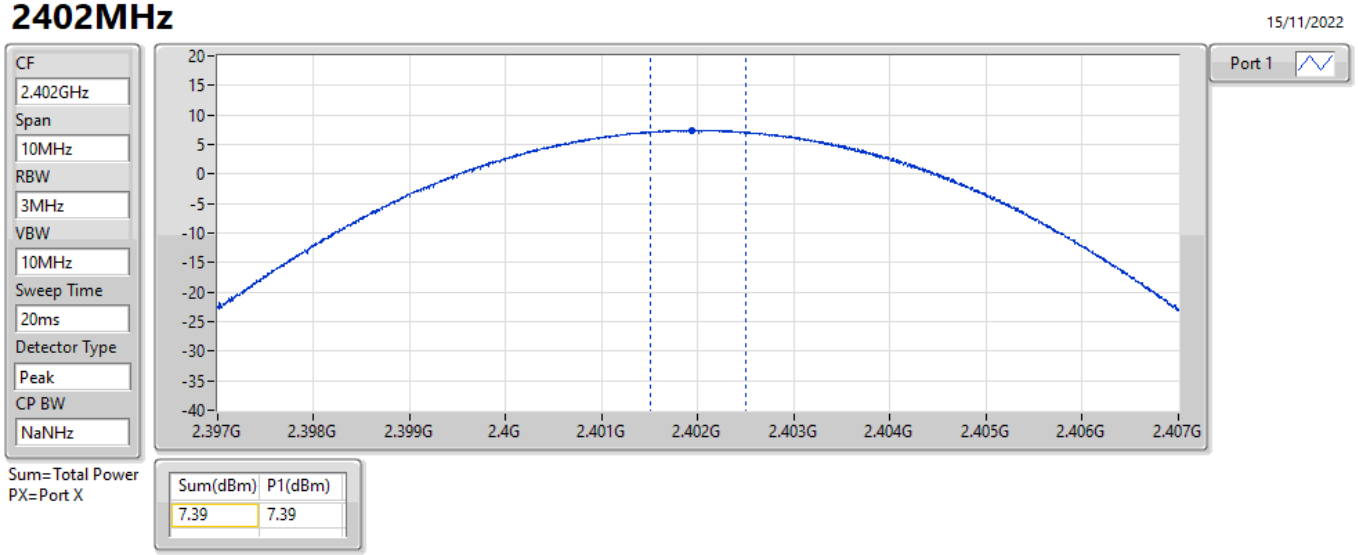

## BT-EDR(2Mbps) PK Power-FS

### 2480MHz



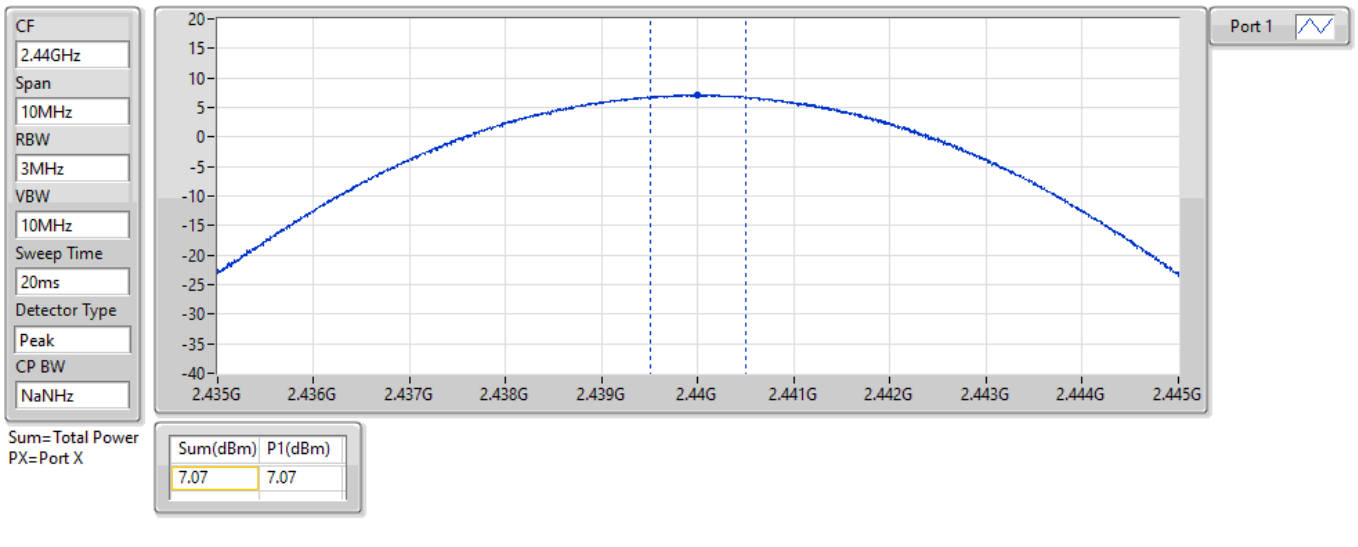
## BT-EDR(3Mbps) PK Power-FS

### 2402MHz




## BT-EDR(3Mbps) PK Power-FS

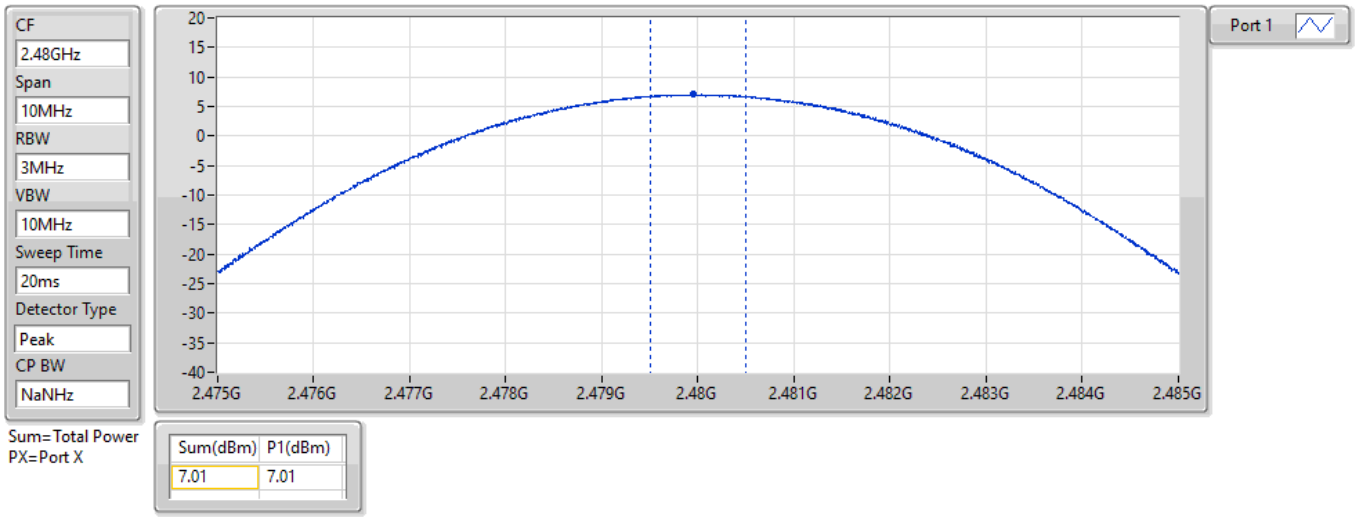
### 2440MHz



**BT-EDR(3Mbps)** **PK Power-FS**

**2480MHz**

15/11/2022



Summary

| Mode | Max-Hop No |
|---|---|
| 2.4-2.4835GHz | - |
| BT-BR(1Mbps) | 79 |
| BT-EDR(2Mbps) | 79 |
| BT-EDR(3Mbps) | 79 |

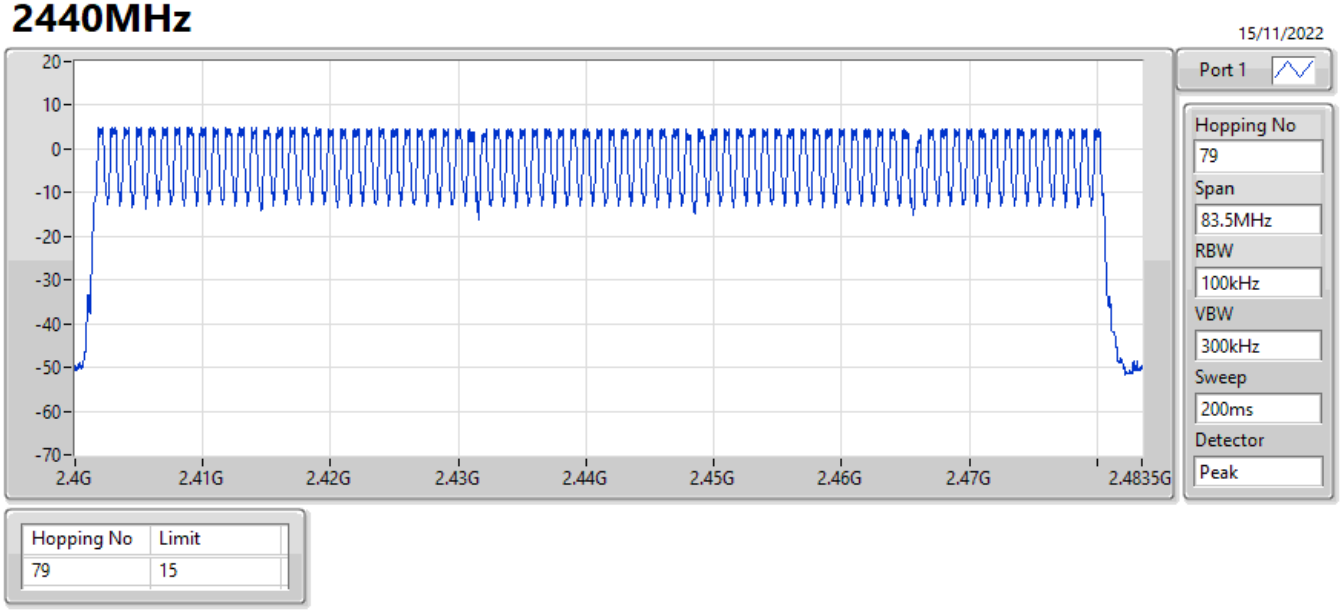
Result

| Mode | Result | Hopping No | Limit |
|---|---|---|---|
| BT-BR(1Mbps) | - | - | - |
| 2440MHz | Pass | 79 | 15 |
| BT-EDR(2Mbps) | - | - | - |
| 2440MHz | Pass | 79 | 15 |
| BT-EDR(3Mbps) | - | - | - |
| 2440MHz | Pass | 79 | 15 |

## BT-BR(1Mbps)

## 2440MHz

## Hopping-FS

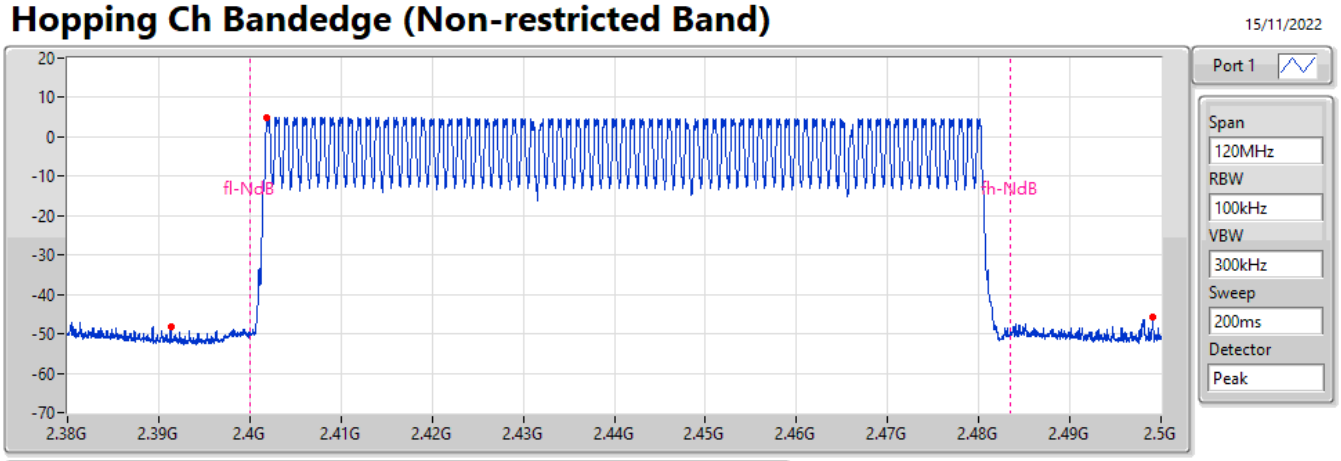



| Hopping No | Limit |
|---|---|
| 79 | 15 |

## BT-BR(1Mbps)

## 2440MHz

## Hopping Ch Bandedge (Non-restricted Band)

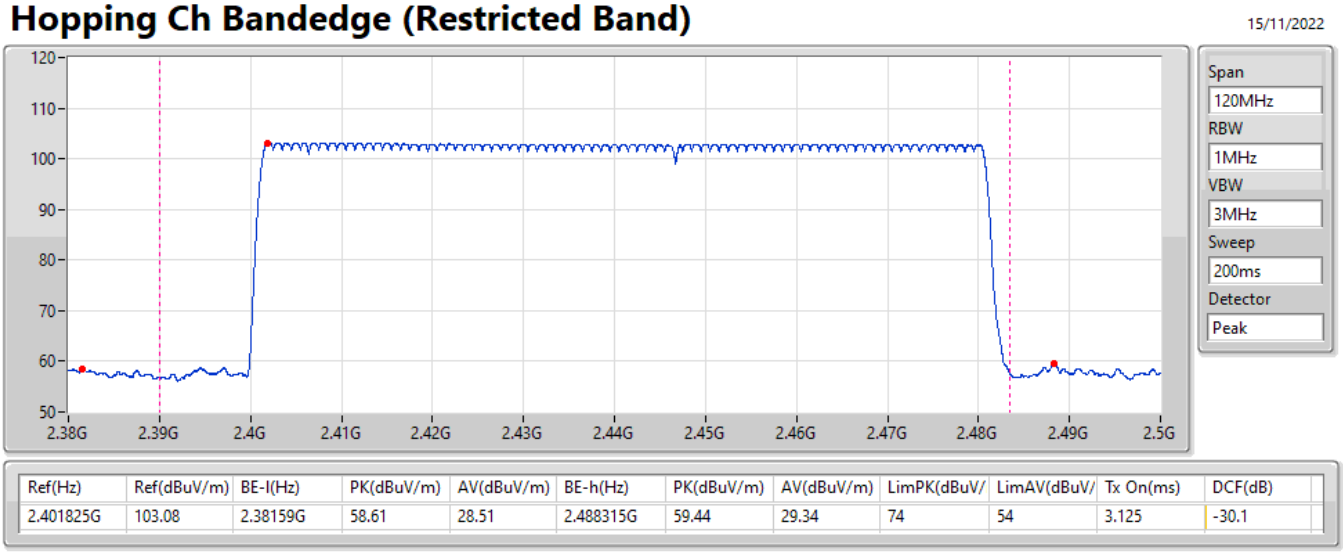



| Limit(dBm) | Ref(Hz) | Ref(dBm) | BE-l(Hz) | BE-l(dBm) | BE-h(Hz) | BE-h(dBm) |
|---|---|---|---|---|---|---|
| -15.15 | 2.401825G | 4.85 | 2.391325G | -48.25 | 2.499085G | -45.75 |

## BT-BR(1Mbps)

## 2440MHz

## Hopping Ch Bandedge (Restricted Band)

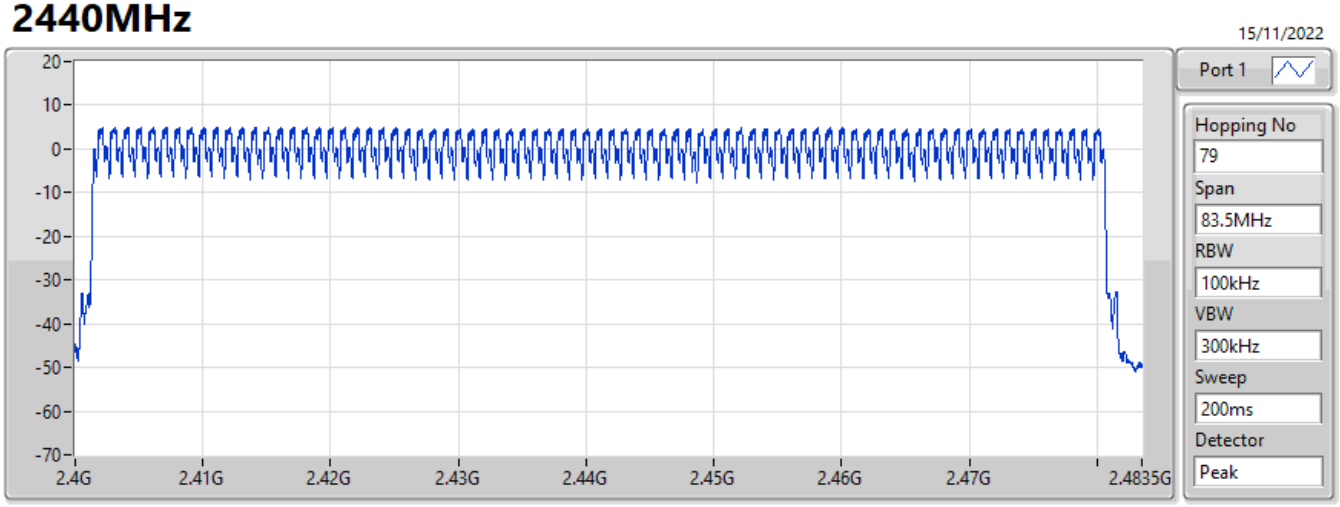



| Ref(Hz) | Ref(dBuV/m) | BE-l(Hz) | PK(dBuV/m) | AV(dBuV/m) | BE-h(Hz) | PK(dBuV/m) | AV(dBuV/m) | LimPK(dBuV/ | LimAV(dBuV/ | Tx On(ms) | DCF(dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.401825G | 103.08 | 2.38159G | 58.61 | 28.51 | 2.488315G | 59.44 | 29.34 | 74 | 54 | 3.125 | -30.1 |

## BT-EDR(2Mbps)

## Hopping-FS

## 2440MHz

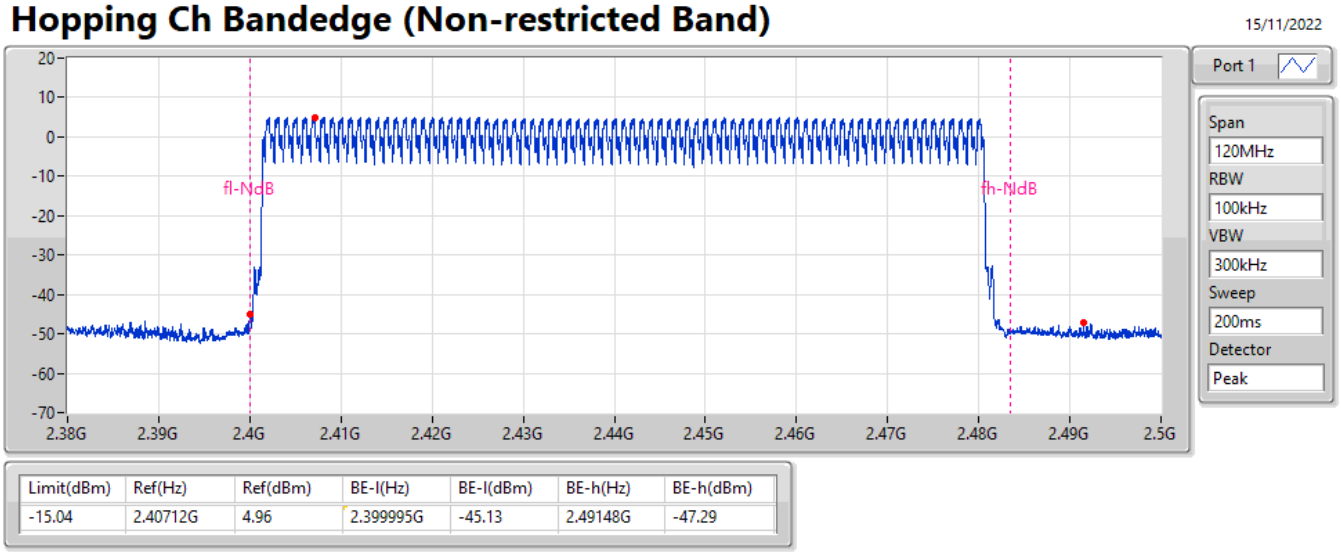



| Hopping No | Limit |
|---|---|
| 79 | 15 |

## BT-EDR(2Mbps)

## 2440MHz

## Hopping Ch Bandedge (Non-restricted Band)

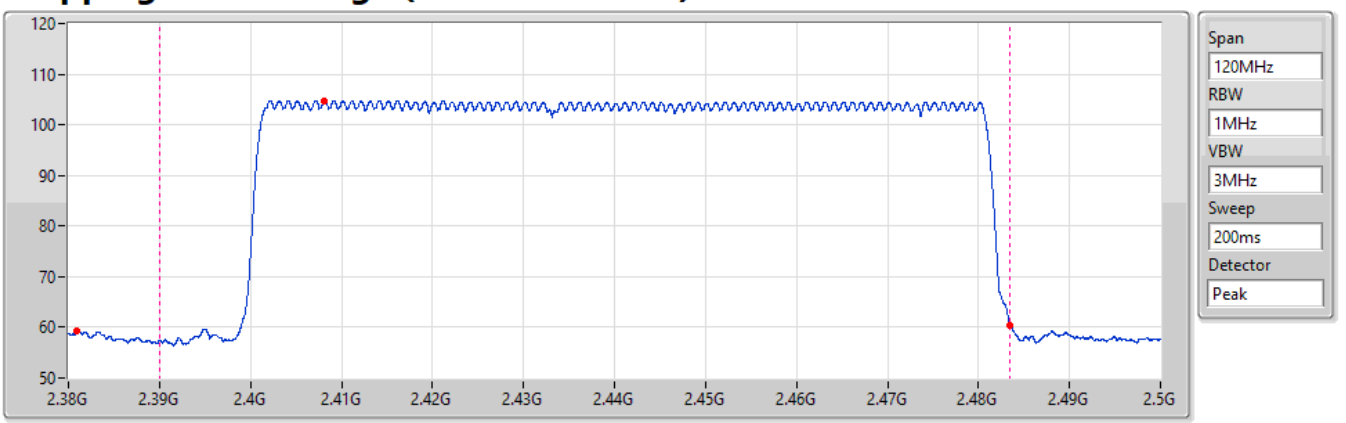



| Limit(dBm) | Ref(Hz) | Ref(dBm) | BE-l(Hz) | BE-l(dBm) | BE-h(Hz) | BE-h(dBm) |
|---|---|---|---|---|---|---|
| -15.04 | 2.40712G | 4.96 | 2.399995G | -45.13 | 2.49148G | -47.29 |

## BT-EDR(2Mbps)

## 2440MHz

## Hopping Ch Bandedge (Restricted Band)

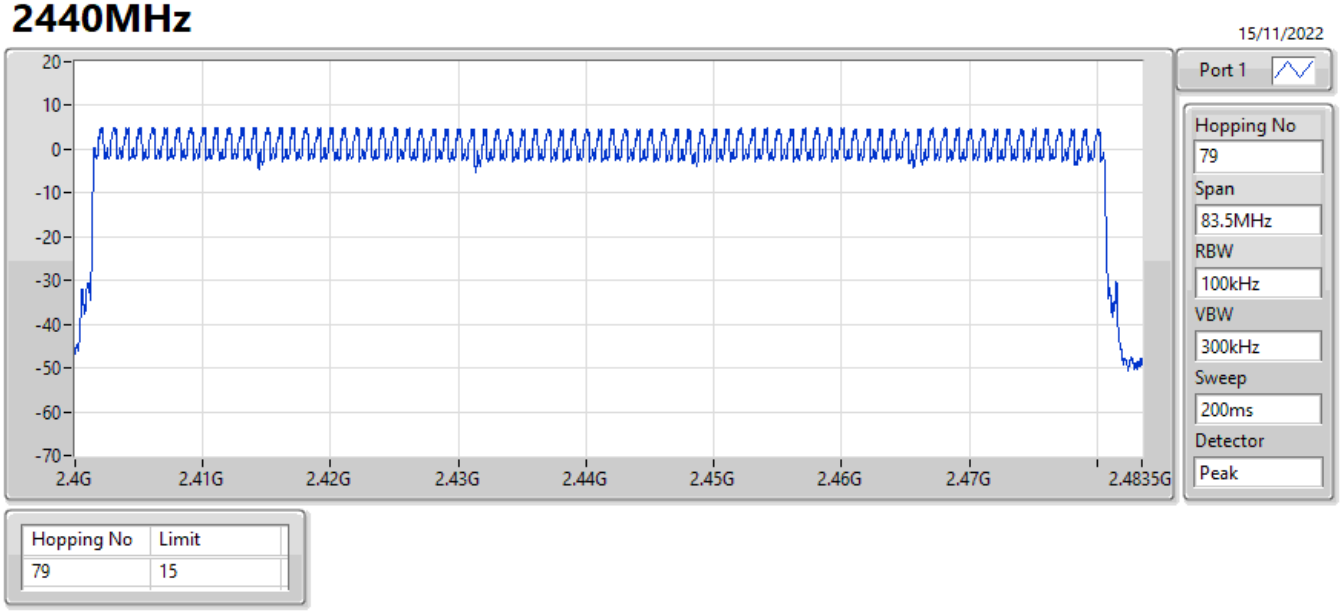



| Ref(Hz) | Ref(dBuV/m) | BE-l(Hz) | PK(dBuV/m) | AV(dBuV/m) | BE-h(Hz) | PK(dBuV/m) | AV(dBuV/m) | LimPK(dBuV/ | LimAV(dBuV/ | Tx On(ms) | DCF(dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.40814G | 104.79 | 2.380975G | 59.22 | 29.12 | 2.483515G | 60.37 | 30.27 | 74 | 54 | 3.125 | -30.1 |

## BT-EDR(3Mbps)

## Hopping-FS

## 2440MHz

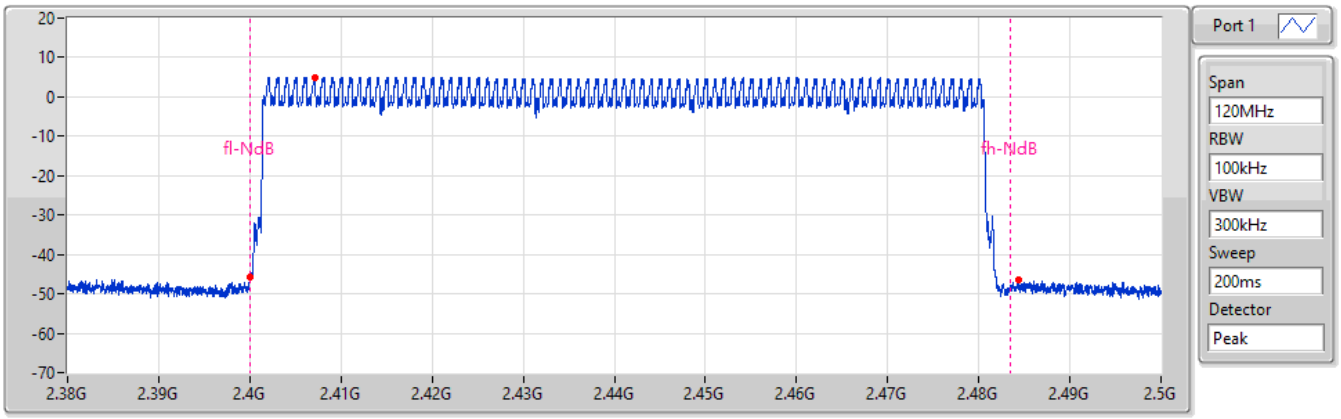



| Hopping No | Limit |
|---|---|
| 79 | 15 |

## BT-EDR(3Mbps)

## 2440MHz

## Hopping Ch Bandedge (Non-restricted Band)

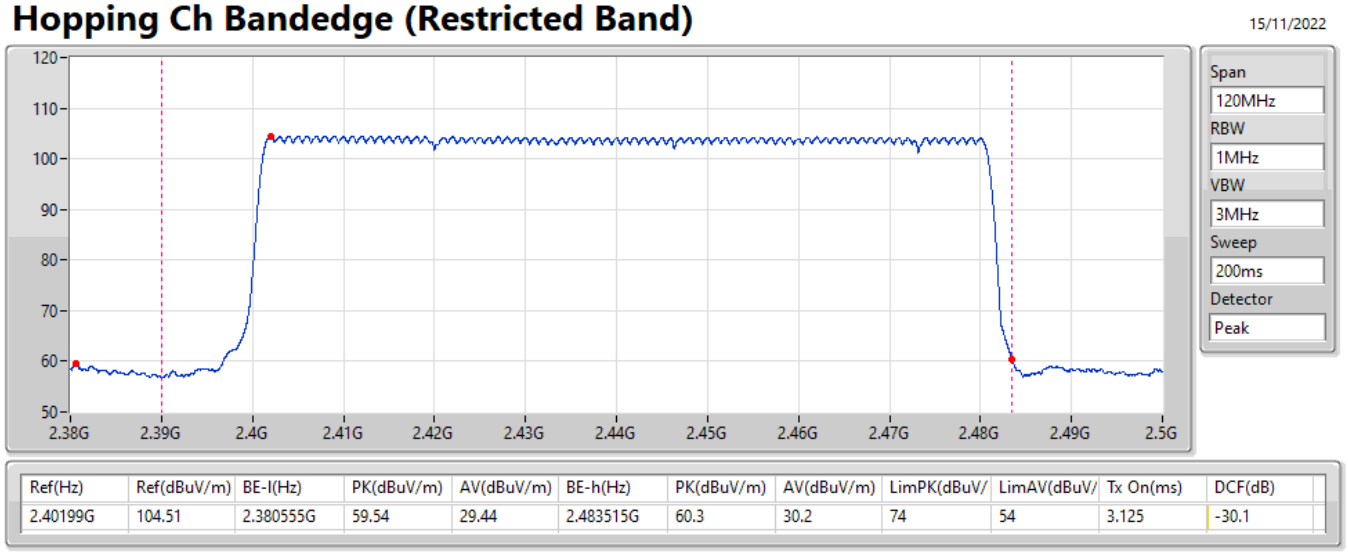



| Limit(dBm) | Ref(Hz) | Ref(dBm) | BE-l(Hz) | BE-l(dBm) | BE-h(Hz) | BE-h(dBm) |
|---|---|---|---|---|---|---|
| -15.02 | 2.407165G | 4.98 | 2.399995G | -45.63 | 2.484325G | -46.52 |

**BT-EDR(3Mbps)**

**2440MHz**

**Hopping Ch Bandedge (Restricted Band)**




| Ref(Hz) | Ref(dBuV/m) | BE-l(Hz) | PK(dBuV/m) | AV(dBuV/m) | BE-h(Hz) | PK(dBuV/m) | AV(dBuV/m) | LimPK(dBuV/ | LimAV(dBuV/ | Tx On(ms) | DCF(dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.40199G | 104.51 | 2.380555G | 59.54 | 29.44 | 2.483515G | 60.3 | 30.2 | 74 | 54 | 3.125 | -30.1 |

Summary

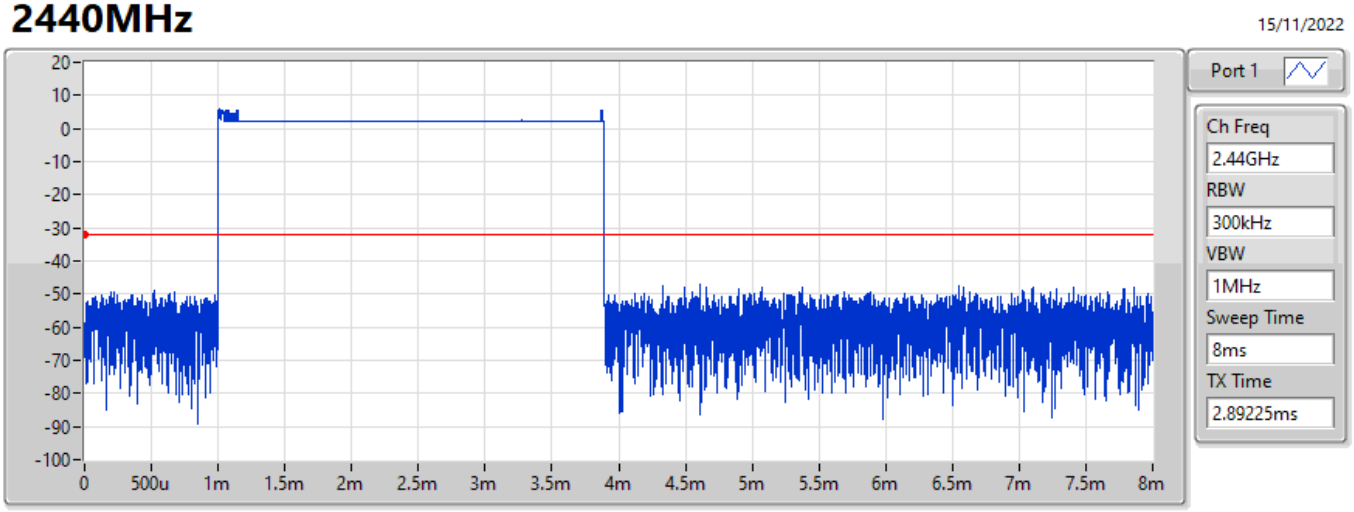
| Mode | Max-Dwell (s) |
|---|---|
| 2.4-2.4835GHz | - |
| BT-BR(1Mbps) | 308.31385m_DH5 |
| BT-EDR(2Mbps) | 308.10065m_DH5 |
| BT-EDR(3Mbps) | 308.1806m_DH5 |

Result

| Mode | Result | Period (s) | Dwell (s) | Limit (s) | Tx On (s) |
|---|---|---|---|---|---|
| BT-BR(1Mbps) | - | - | - | - | - |
| 2440MHz | Pass | 31.6 | 308.31385m_DH5 | 400m | 2.89225m |
| 2440MHz | Pass | 8 | 154.1436m_DH5-AFH | 400m | 2.892m |
| BT-EDR(2Mbps) | - | - | - | - | - |
| 2440MHz | Pass | 31.6 | 308.10065m_DH5 | 400m | 2.89025m |
| 2440MHz | Pass | 8 | 154.06365m_DH5-AFH | 400m | 2.8905m |
| BT-EDR(3Mbps) | - | - | - | - | - |
| 2440MHz | Pass | 31.6 | 308.1806m_DH5 | 400m | 2.891m |
| 2440MHz | Pass | 8 | 154.076975m_DH5-AFH | 400m | 2.89075m |

**BT-BR(1Mbps)** **Dwell-FS**

**2440MHz**

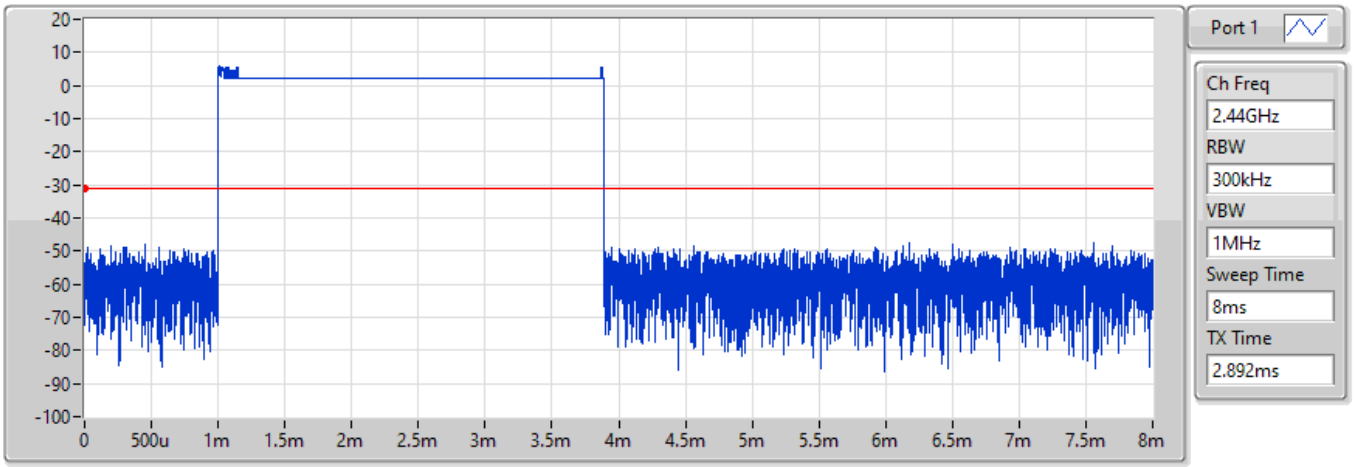



| Period(s) | Dwell(s) | Limit(s) | Tx On(s) |
|---|---|---|---|
| 31.6 | 308.31385m_DH5 | 400m | 2.89225m |

**DH5**

**BT-BR(1Mbps)** **Dwell-FS**

**2440MHz**

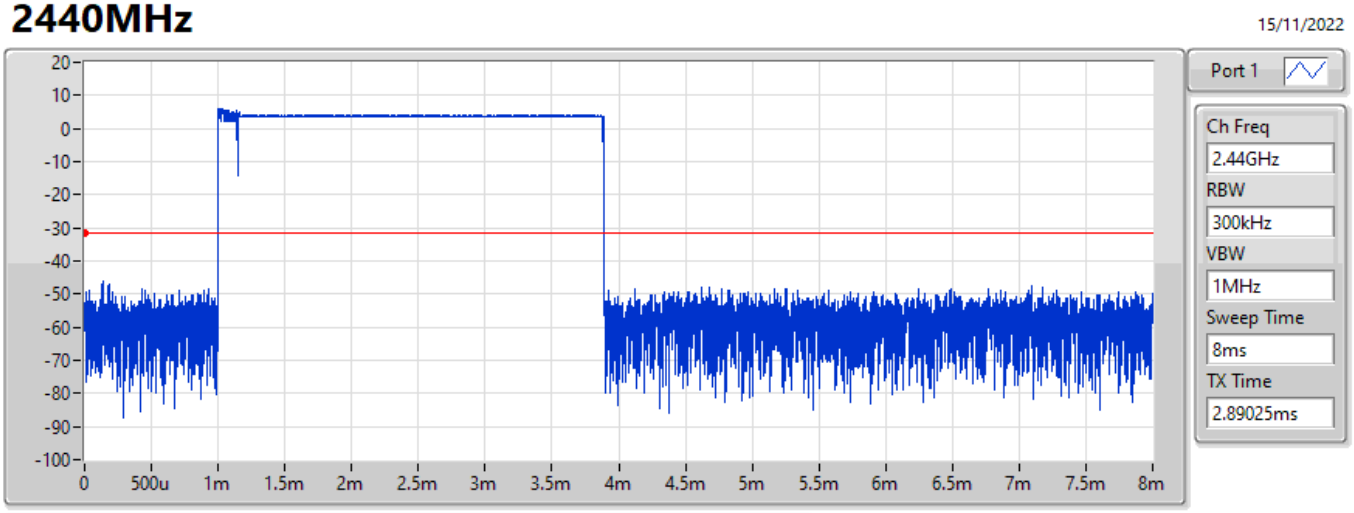



| Period(s) | Dwell(s) | Limit(s) | Tx On(s) |
|---|---|---|---|
| 8 | 154.1436m_DH5-AFH | 400m | 2.892m |

**DH5-AFH**

**BT-EDR(2Mbps)** **Dwell-FS**

**2440MHz**

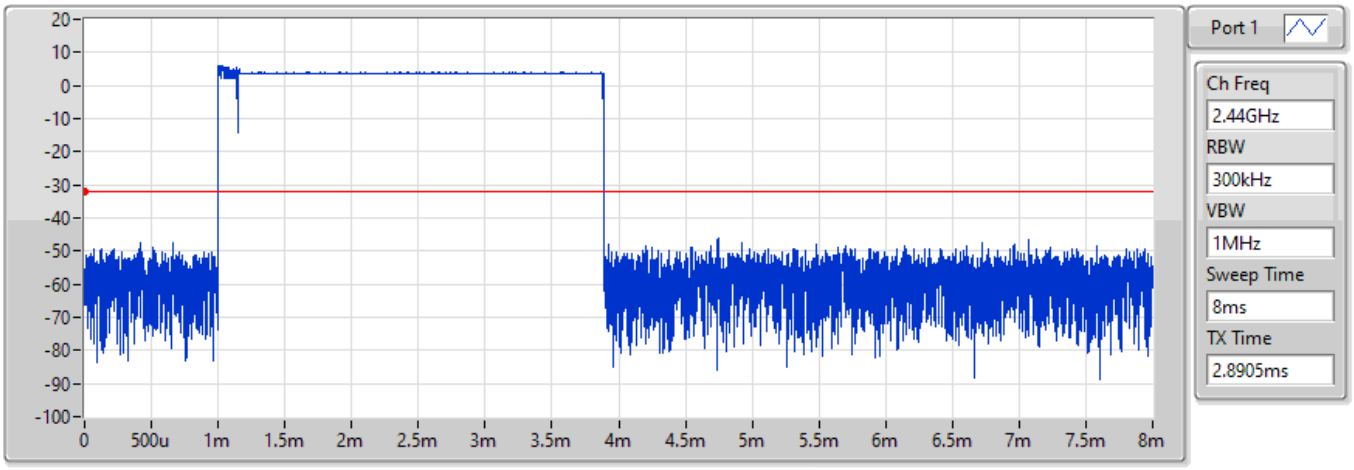



| Period(s) | Dwell(s) | Limit(s) | Tx On(s) |
|---|---|---|---|
| 31.6 | 308.10065m_DH5 | 400m | 2.89025m |

**DH5**

**BT-EDR(2Mbps)** **Dwell-FS**

**2440MHz**



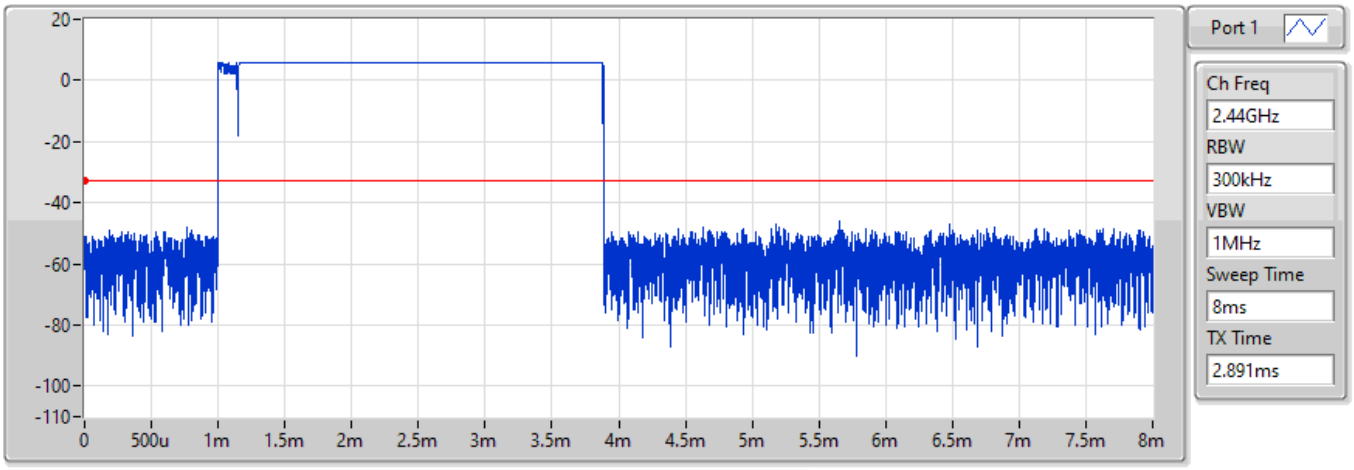

| Period(s) | Dwell(s) | Limit(s) | Tx On(s) |
|---|---|---|---|
| 8 | 154.06365m_DH5-AFH | 400m | 2.8905m |

**DH5-AFH**

**BT-EDR(3Mbps)** **Dwell-FS**

**2440MHz**

15/11/2022



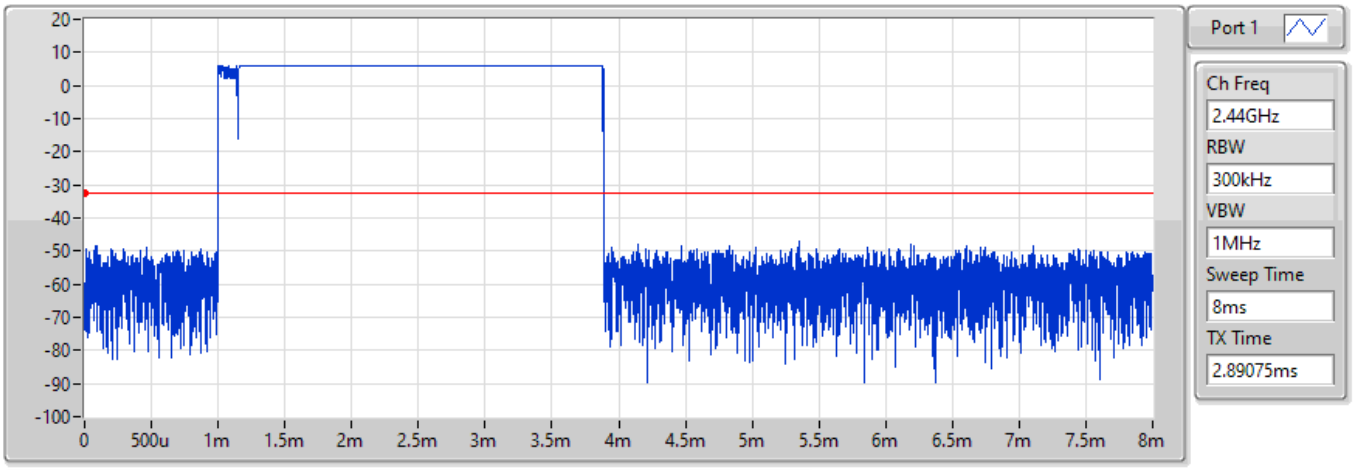

| Period(s) | Dwell(s) | Limit(s) | Tx On(s) |
|---|---|---|---|
| 31.6 | 308.1806m_DH5 | 400m | 2.891m |

**DH5**

**BT-EDR(3Mbps)** **Dwell-FS**

**2440MHz**

15/11/2022




| Period(s) | Dwell(s) | Limit(s) | Tx On(s) |
|---|---|---|---|
| 8 | 154.076975m_DH5-AFI | 400m | 2.89075m |

**DH5-AFH**

Summary

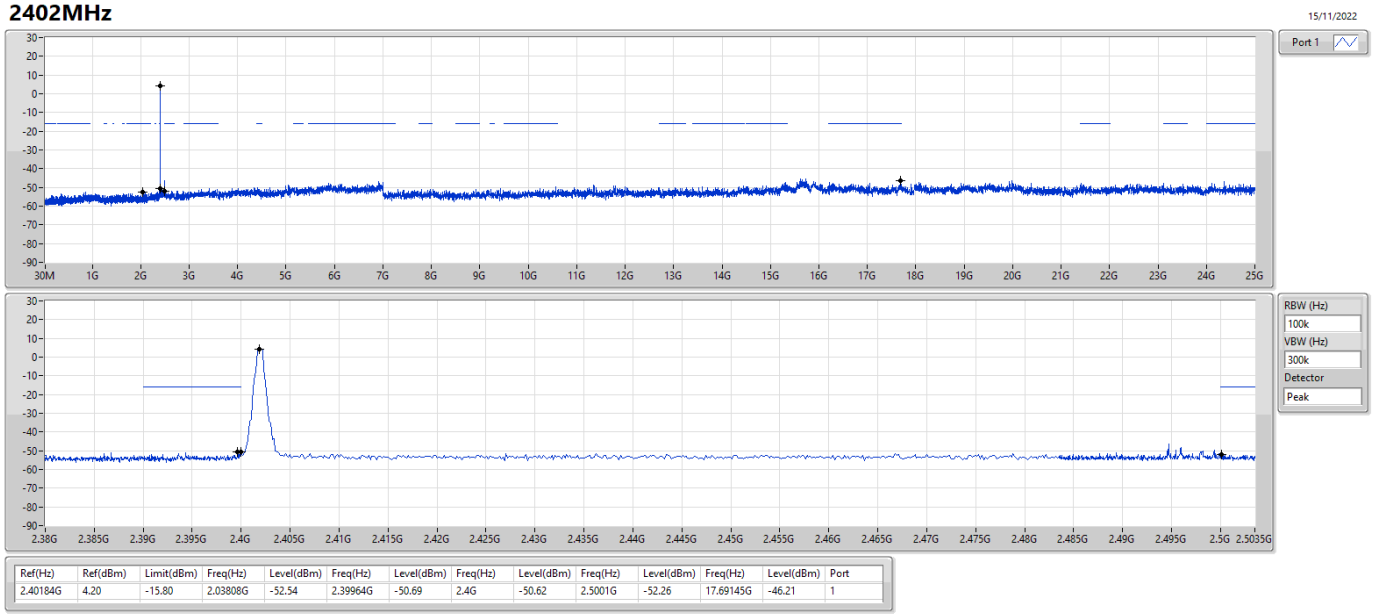
| Mode | Result | Ref (Hz) | Ref (dBm) | Limit (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Port |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.4-2.4835GHz | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| BT-BR(1Mbps) | Pass | 2.40184G | 4.20 | -15.80 | 2.03808G | -52.54 | 2.39964G | -50.69 | 2.4G | -50.62 | 2.5001G | -52.26 | 17.69145G | -46.21 | 1 |
| BT-EDR(2Mbps) | Pass | 2.402G | 4.12 | -15.88 | 2.1074G | -52.06 | 2.39996G | -46.91 | 2.4G | -46.63 | 2.50098G | -52.17 | 16.61724G | -47.71 | 1 |
| BT-EDR(3Mbps) | Pass | 2.40184G | 3.77 | -16.23 | 907.73M | -52.09 | 2.39964G | -44.06 | 2.4G | -42.82 | 2.50182G | -51.76 | 6.90438G | -46.44 | 1 |

Result

| Mode | Result | Ref (Hz) | Ref (dBm) | Limit (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Port |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BT-BR(1Mbps) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2402MHz | Pass | 2.40184G | 4.20 | -15.80 | 2.03808G | -52.54 | 2.39964G | -50.69 | 2.4G | -50.62 | 2.5001G | -52.26 | 17.69145G | -46.21 | 1 |
| 2440MHz | Pass | 2.44008G | 3.92 | -16.08 | 1.80073G | -52.92 | 2.39072G | -51.33 | 2.4G | -54.11 | 2.5015G | -51.95 | 16.23761G | -47.59 | 1 |
| 2480MHz | Pass | 2.48016G | 4.32 | -15.68 | 801.98M | -51.66 | 2.39076G | -52.20 | 2.4G | -52.66 | 2.5021G | -51.18 | 6.70753G | -47.37 | 1 |
| BT-EDR(2Mbps) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2402MHz | Pass | 2.402G | 4.12 | -15.88 | 2.1074G | -52.06 | 2.39996G | -46.91 | 2.4G | -46.63 | 2.50098G | -52.17 | 16.61724G | -47.71 | 1 |
| 2440MHz | Pass | 2.44008G | 3.55 | -16.45 | 1.89238G | -52.70 | 2.39536G | -51.61 | 2.4G | -54.40 | 2.50042G | -51.33 | 5.81049G | -46.91 | 1 |
| 2480MHz | Pass | 2.47983G | 3.63 | -16.37 | 876M | -53.00 | 2.39012G | -51.17 | 2.4G | -53.95 | 2.50294G | -52.24 | 16.24605G | -47.21 | 1 |
| BT-EDR(3Mbps) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2402MHz | Pass | 2.40184G | 3.77 | -16.23 | 907.73M | -52.09 | 2.39964G | -44.06 | 2.4G | -42.82 | 2.50182G | -51.76 | 6.90438G | -46.44 | 1 |
| 2440MHz | Pass | 2.43991G | 4.24 | -15.76 | 2.17908G | -52.86 | 2.39892G | -52.06 | 2.4G | -53.73 | 2.50046G | -51.92 | 17.69426G | -46.96 | 1 |
| 2480MHz | Pass | 2.48016G | 3.80 | -16.20 | 1.86653G | -52.00 | 2.39088G | -50.97 | 2.4G | -54.39 | 2.50274G | -50.96 | 16.22918G | -46.24 | 1 |

**BT-BR(1Mbps)** **CSENdB-FS**

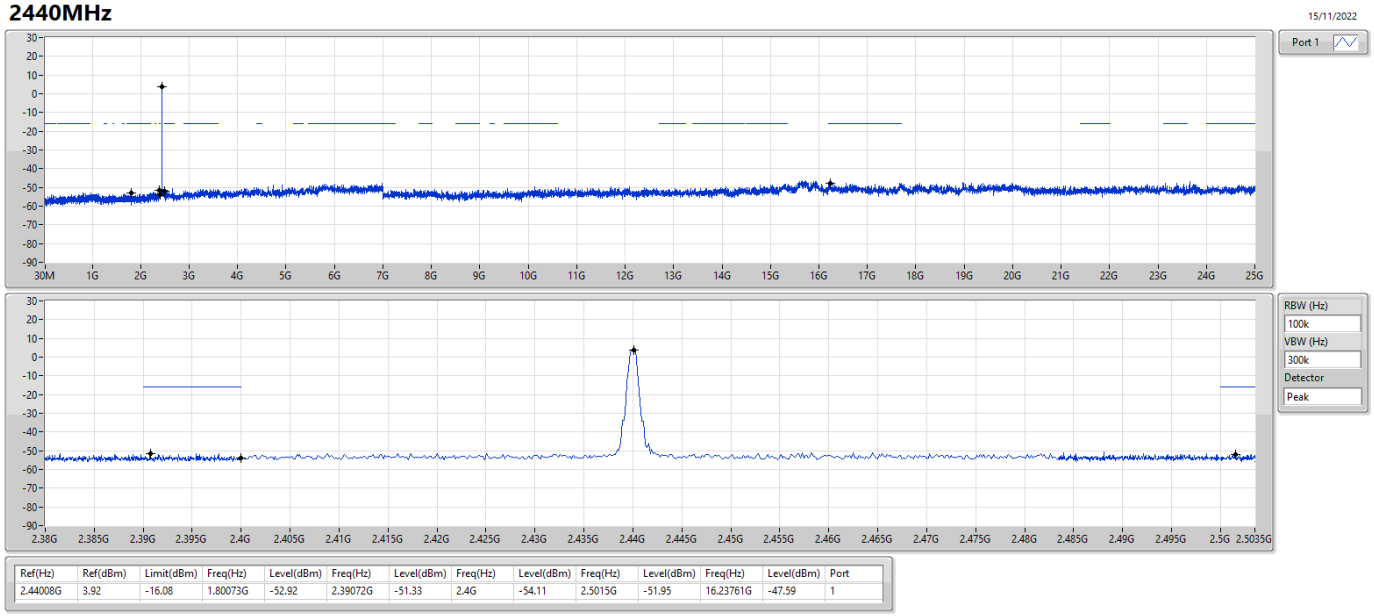
**2402MHz**




| Ref(Hz) | Ref(dBm) | Limit(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Port |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.40184G | 4.20 | -15.80 | 2.03808G | -52.54 | 2.39964G | -50.69 | 2.4G | -50.62 | 2.5001G | -52.26 | 17.69145G | -46.21 | 1 |

**BT-BR(1Mbps)** **CSENdB-FS**

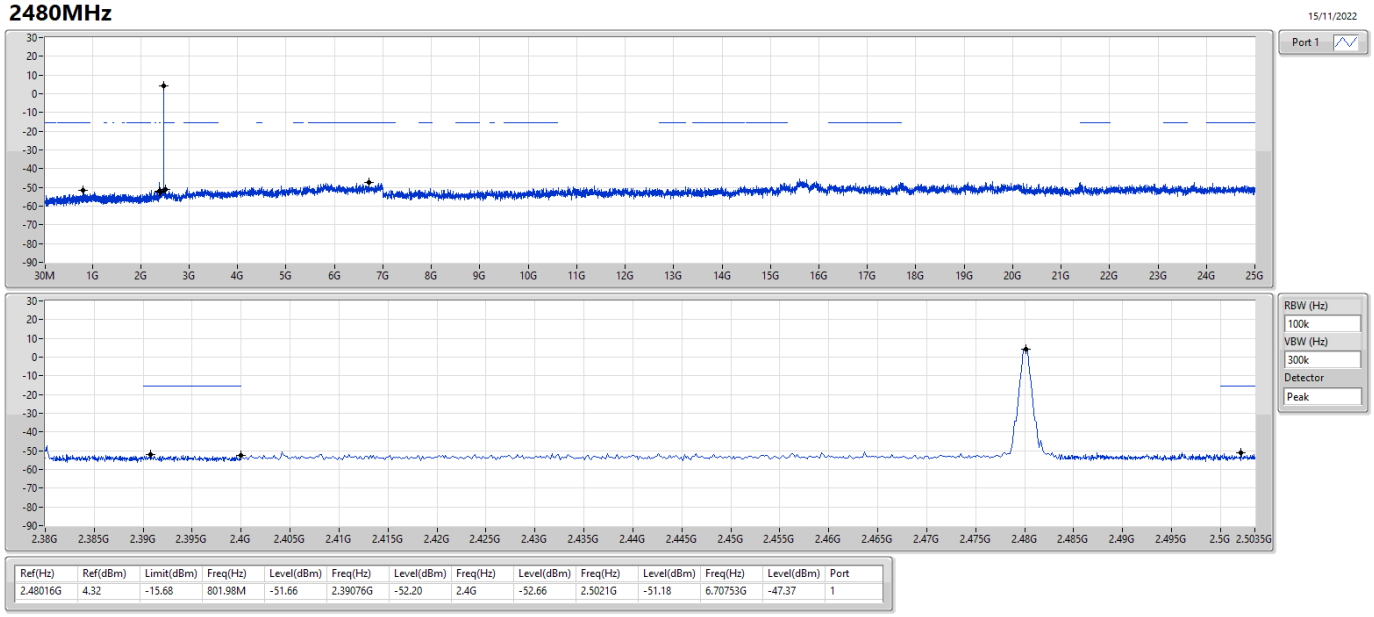
**2440MHz**




| Ref(Hz) | Ref(dBm) | Limit(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Port |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.44008G | 3.92 | -16.08 | 1.80073G | -52.92 | 2.39072G | -51.33 | 2.4G | -54.11 | 2.5015G | -51.95 | 16.23761G | -47.59 | 1 |

**BT-BR(1Mbps)** **CSENdB-FS**

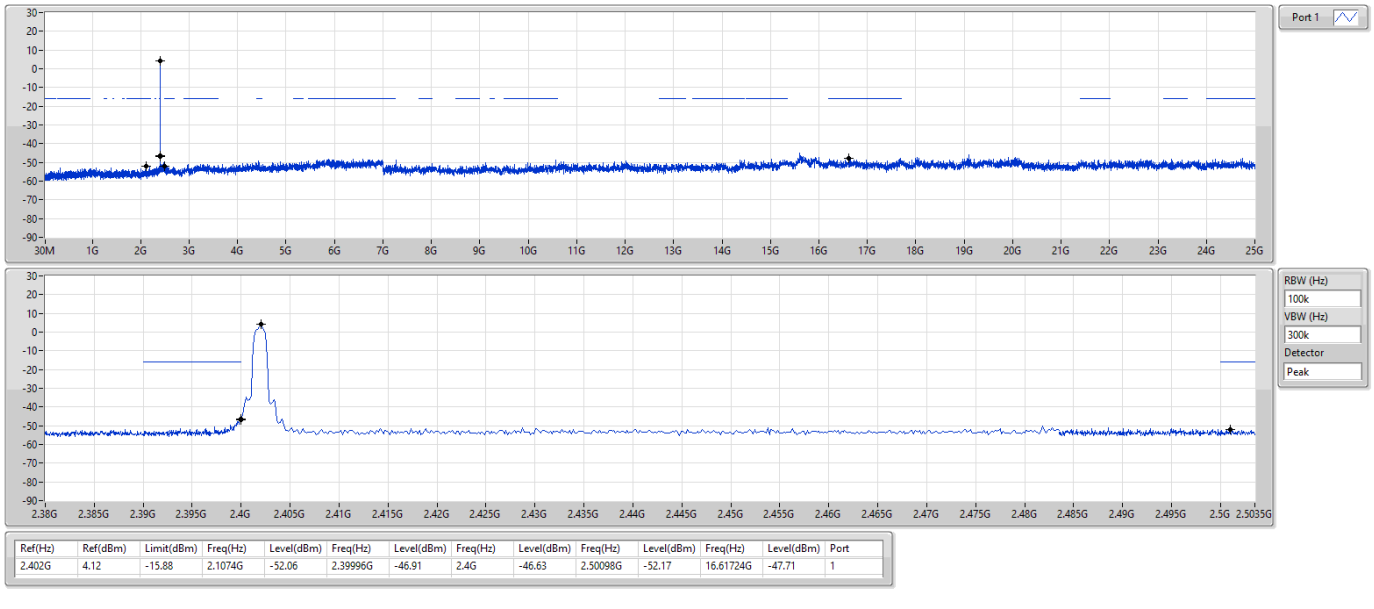
**2480MHz**




| Ref(Hz) | Ref(dBm) | Limit(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Port |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.48016G | 4.32 | -15.68 | 801.98M | -51.66 | 2.39076G | -52.20 | 2.4G | -52.66 | 2.5021G | -51.18 | 6.70753G | -47.37 | 1 |

**BT-EDR(2Mbps)** **CSENdB-FS**

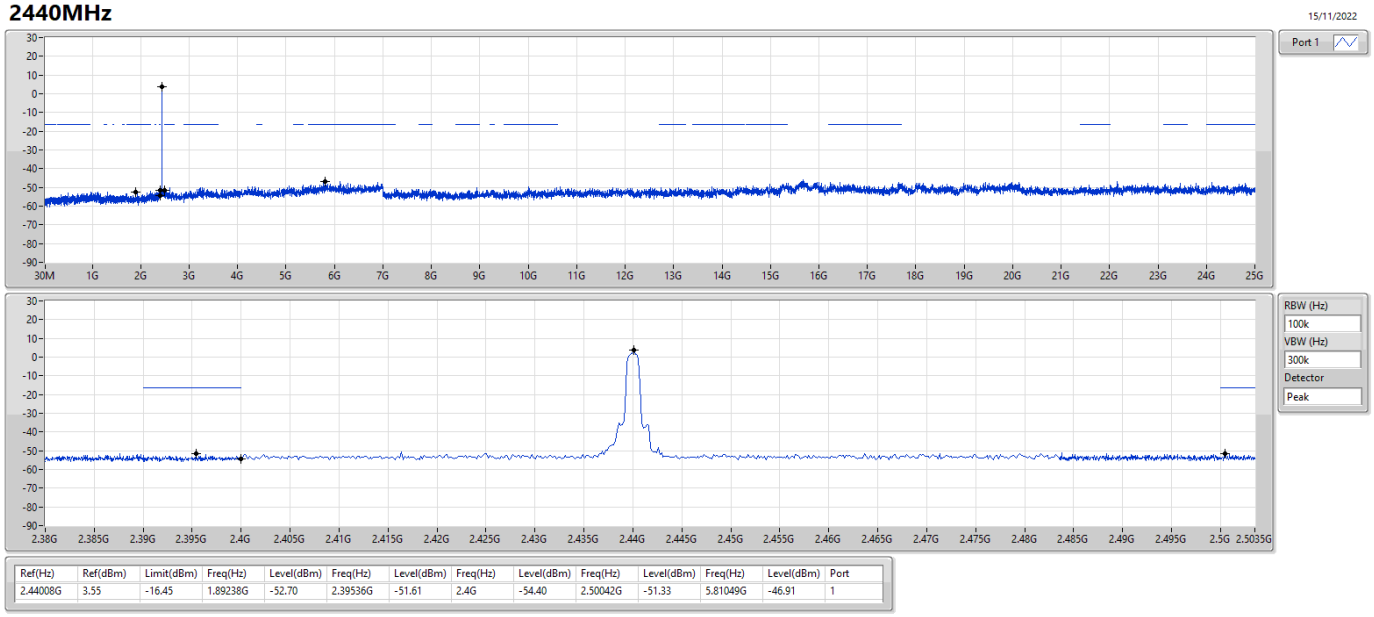
**2402MHz**




| Ref(Hz) | Ref(dBm) | Limit(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Port |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.402G | 4.12 | -15.88 | 2.1074G | -52.06 | 2.39996G | -46.91 | 2.4G | -46.63 | 2.50098G | -52.17 | 16.61724G | -47.71 | 1 |

**BT-EDR(2Mbps)** **CSENdB-FS**

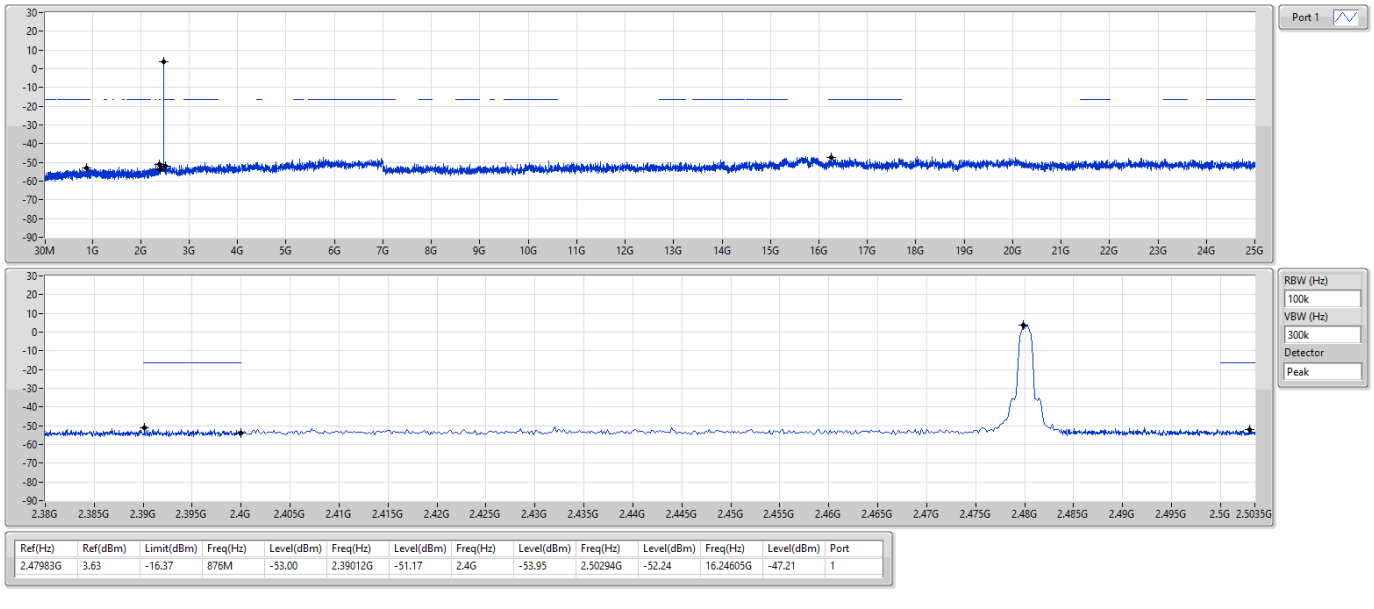
**2440MHz**




| Ref(Hz) | Ref(dBm) | Limit(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Port |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.44008G | 3.55 | -16.45 | 1.89238G | -52.70 | 2.39536G | -51.61 | 2.4G | -54.40 | 2.50042G | -51.33 | 5.81049G | -46.91 | 1 |

**BT-EDR(2Mbps)** **CSENdB-FS**

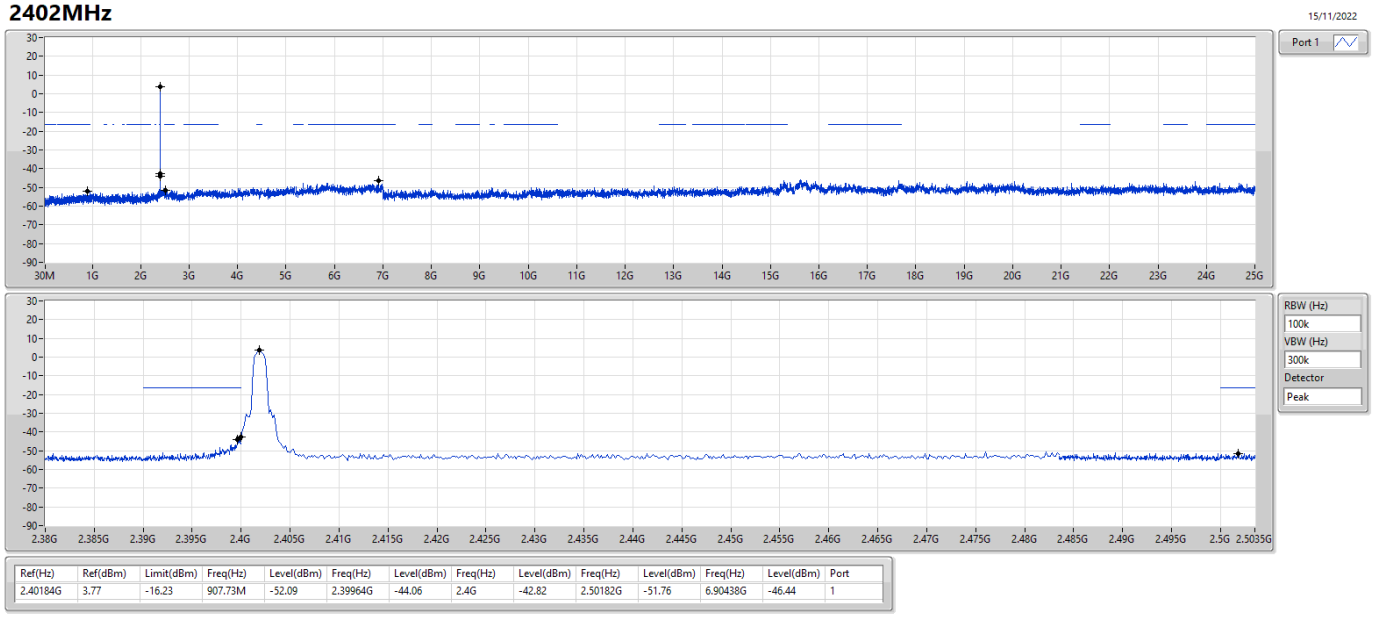
**2480MHz**




| Ref(Hz) | Ref(dBm) | Limit(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Port |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.47983G | 3.63 | -16.37 | 876M | -53.00 | 2.39012G | -51.17 | 2.4G | -53.95 | 2.50294G | -52.24 | 16.24605G | -47.21 | 1 |

**BT-EDR(3Mbps)** **CSENdB-FS**

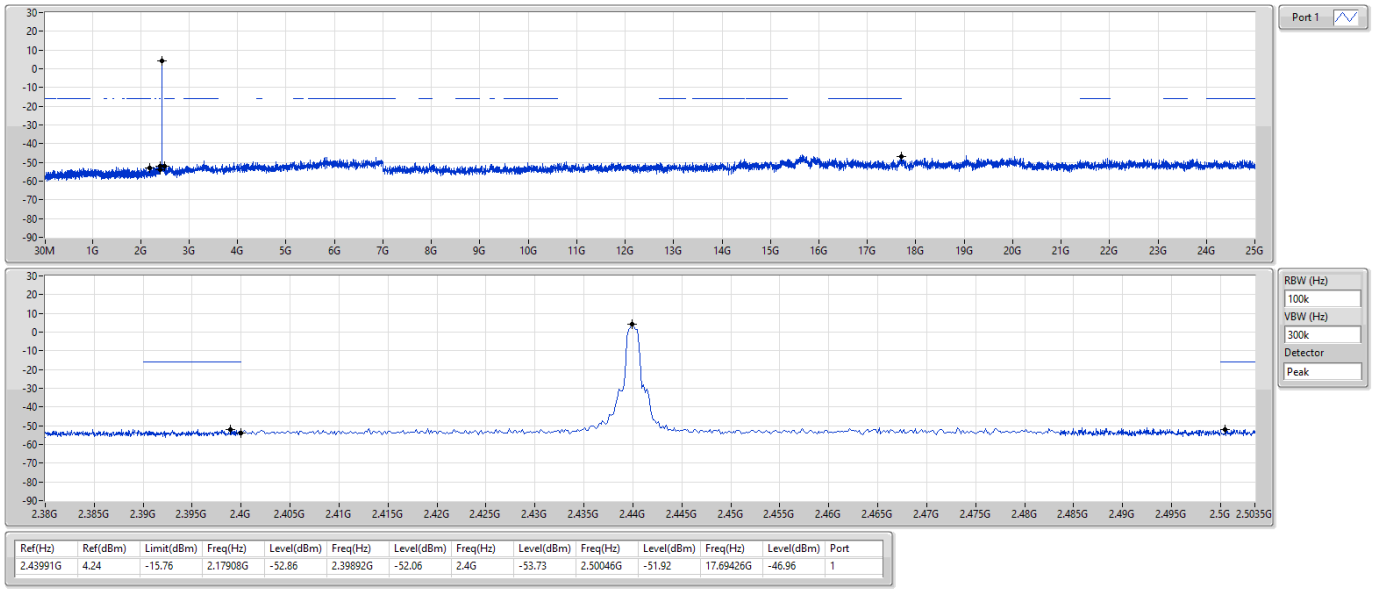
**2402MHz**




| Ref(Hz) | Ref(dBm) | Limit(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Port |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.40184G | 3.77 | -16.23 | 907.73M | -52.09 | 2.39964G | -44.06 | 2.4G | -42.82 | 2.50182G | -51.76 | 6.90438G | -46.44 | 1 |

**BT-EDR(3Mbps)** **CSENdB-FS**

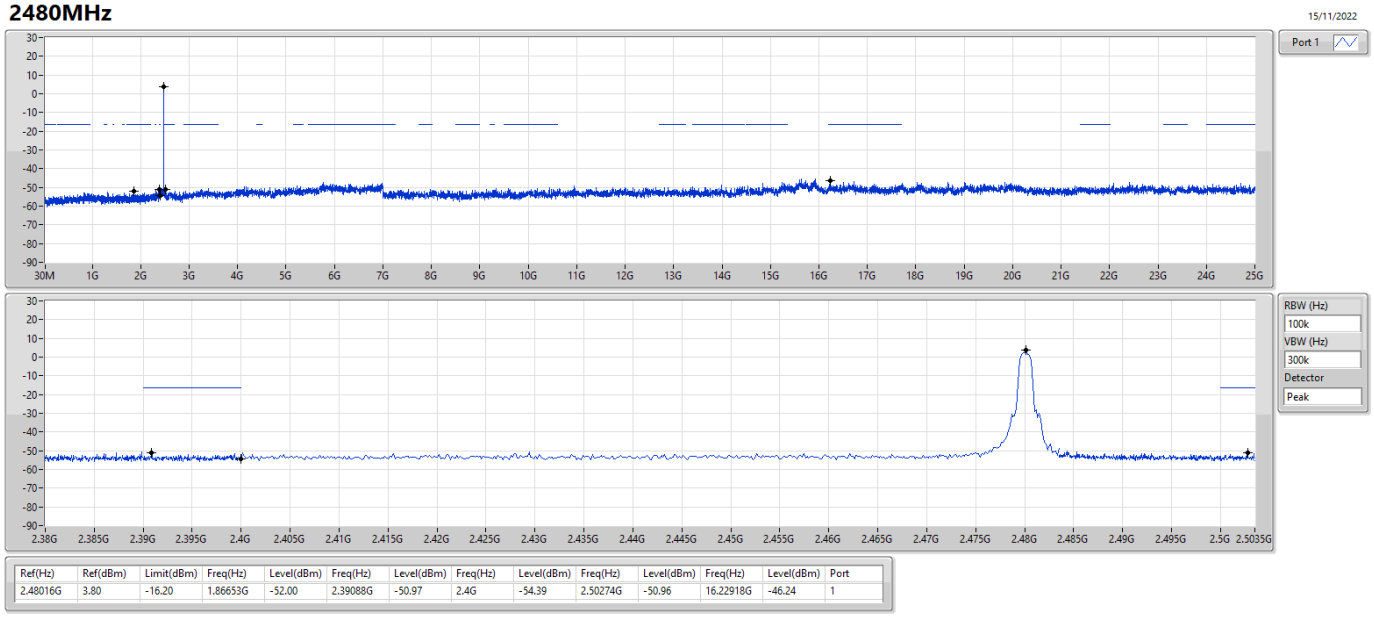
**2440MHz**




| Ref(Hz) | Ref(dBm) | Limit(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Port |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.43991G | 4.24 | -15.76 | 2.17908G | -52.86 | 2.39892G | -52.06 | 2.4G | -53.73 | 2.50046G | -51.92 | 17.69426G | -46.96 | 1 |

**BT-EDR(3Mbps)** **CSENdB-FS**

**2480MHz**

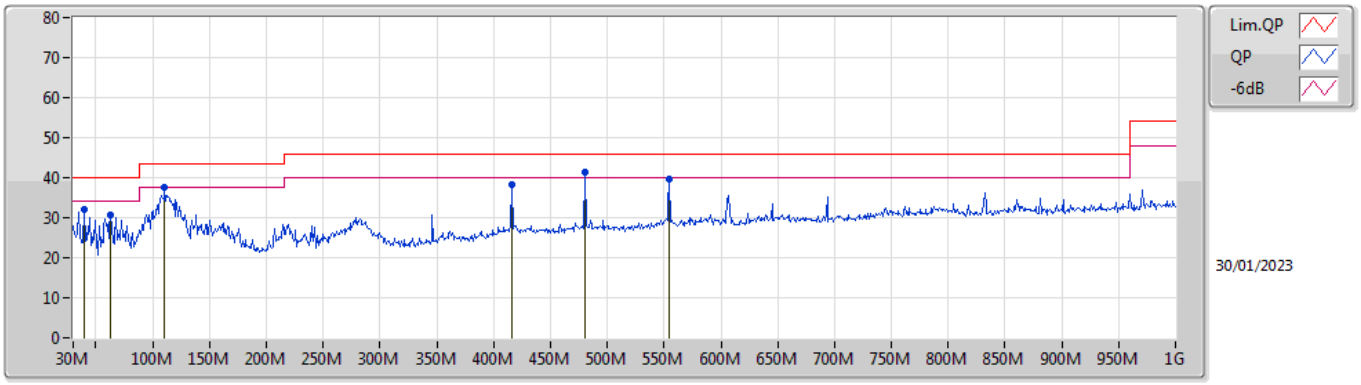



| Ref(Hz) | Ref(dBm) | Limit(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz) | Level(dBm) | Port |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.48016G | 3.80 | -16.20 | 1.86653G | -52.00 | 2.39088G | -50.97 | 2.4G | -54.39 | 2.50274G | -50.96 | 16.22918G | -46.24 | 1 |

Summary

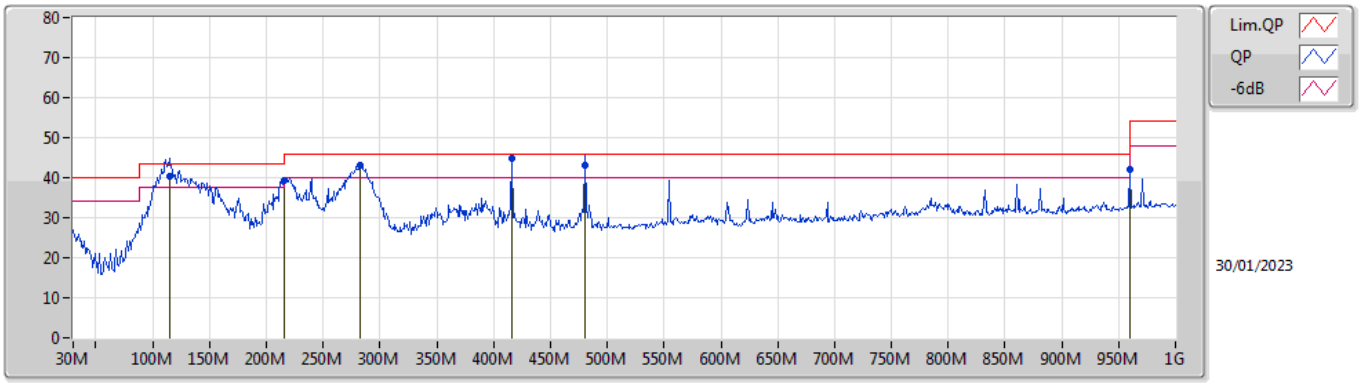
| Mode | Result | Type | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Condition |
|---|---|---|---|---|---|---|---|
| Mode 3 | Pass | QP | 416.06M | 44.99 | 46.00 | -1.01 | Horizontal |

## Mode 3




| Type | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comment | Raw | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB/m) | (m) | | (°) | (m) | | (dBuV/m) | (dB/m) | (dB) | (dB) |
| PK | 39.7M | 32.18 | 40.00 | -7.82 | -11.90 | 3 | Vertical | 123 | 1.00 | - | 44.08 | 19.32 | 0.90 | 32.12 |
| PK | 62.98M | 30.85 | 40.00 | -9.15 | -18.65 | 3 | Vertical | 124 | 2.00 | - | 49.50 | 12.41 | 1.09 | 32.15 |
| PK | 110.51M | 37.58 | 43.50 | -5.92 | -12.95 | 3 | Vertical | 213 | 1.50 | - | 50.53 | 17.64 | 1.43 | 32.02 |
| PK | 416.06M | 38.39 | 46.00 | -7.61 | -6.49 | 3 | Vertical | 239 | 2.00 | - | 44.88 | 22.23 | 2.77 | 31.49 |
| PK | 480.08M | 41.39 | 46.00 | -4.61 | -5.33 | 3 | Vertical | 211 | 2.00 | "Worst" | 46.72 | 23.21 | 2.99 | 31.53 |
| PK | 554.77M | 39.67 | 46.00 | -6.33 | -3.72 | 3 | Vertical | 5 | 1.50 | - | 43.39 | 24.75 | 3.20 | 31.67 |

## Mode 3



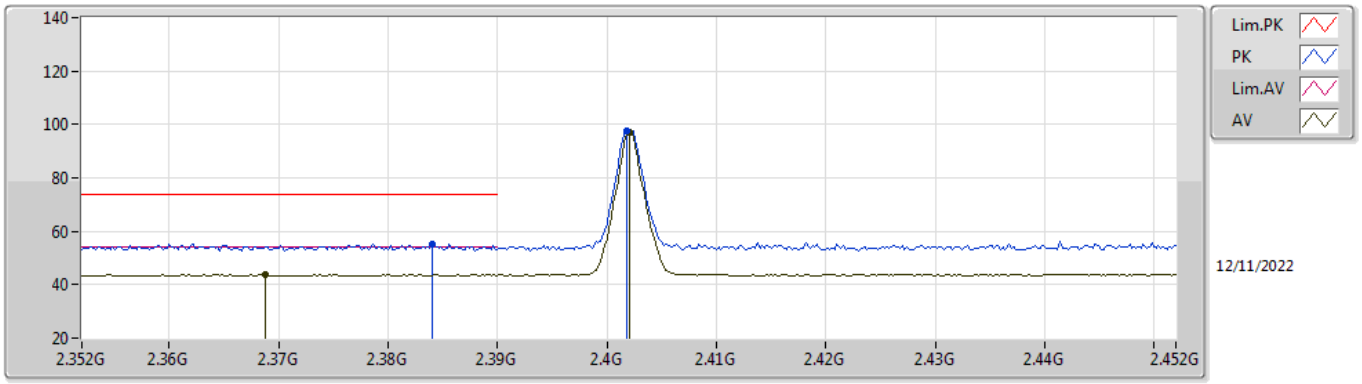

| Type | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comment | Raw | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB/m) | (m) | | (°) | (m) | | (dBuV/m) | (dB/m) | (dB) | (dB) |
| QP | 114.39M | 40.36 | 43.50 | -3.14 | -12.64 | 3 | Horizontal | 359 | 2.00 | - | 53.00 | 17.87 | 1.46 | 31.97 |
| PK | 215.27M | 39.21 | 43.50 | -4.29 | -15.16 | 3 | Horizontal | 145 | 2.00 | - | 54.37 | 14.89 | 1.91 | 31.96 |
| PK | 282.2M | 43.14 | 46.00 | -2.86 | -10.83 | 3 | Horizontal | 338 | 1.50 | - | 53.97 | 18.74 | 2.23 | 31.80 |
| QP | 416.06M | 44.99 | 46.00 | -1.01 | -6.49 | 3 | Horizontal | 294 | 1.00 | "Worst" | 51.48 | 22.23 | 2.77 | 31.49 |
| QP | 480.08M | 42.94 | 46.00 | -3.06 | -5.33 | 3 | Horizontal | 194 | 1.00 | - | 48.27 | 23.21 | 2.99 | 31.53 |
| PK | 959.9M | 42.21 | 46.00 | -3.79 | 0.65 | 3 | Horizontal | 360 | 1.25 | - | 41.56 | 26.80 | 4.30 | 30.45 |

Summary

| Mode | Result | Type | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Dist (m) | Condition | Azimuth (°) | Height (m) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.4-2.4835GHz | - | - | - | - | - | - | - | - | - | - | - |
| BT-EDR(3Mbps) | Pass | AV | 2.4835G | 48.50 | 54.00 | -5.50 | 3 | Horizontal | 210 | 2.06 | - |

## BT-BR(1Mbps)

## 2402MHz_TX

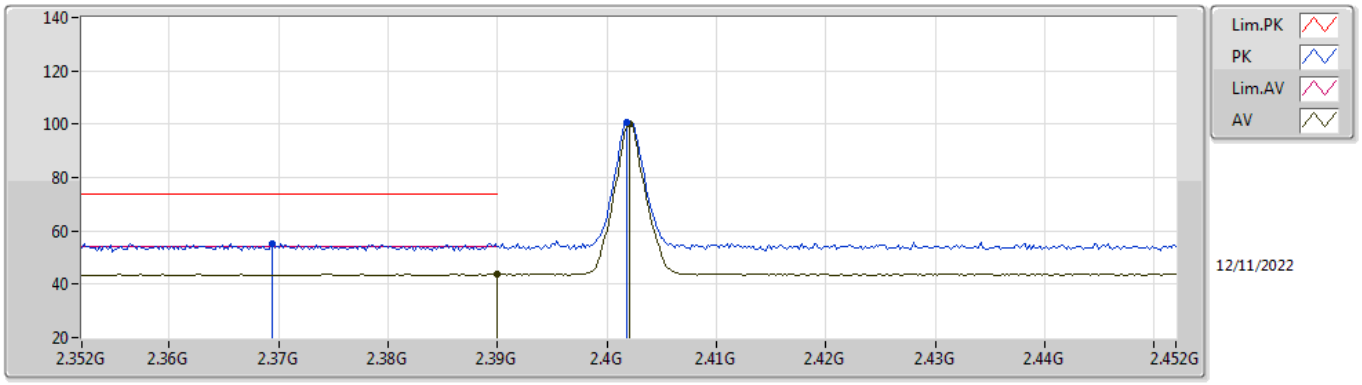



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.384G | 55.28 | 74.00 | -18.72 | 23.72 | 3 | Vertical | 167 | 2.77 | - | 28.37 | 3.19 | - |
| AV | 2.3688G | 43.68 | 54.00 | -10.32 | 12.16 | 3 | Vertical | 167 | 2.77 | - | 28.34 | 3.18 | - |
| PK | 2.4018G | 97.81 | Inf | -Inf | 66.21 | 3 | Vertical | 167 | 2.77 | - | 28.40 | 3.20 | - |
| AV | 2.402G | 96.95 | Inf | -Inf | 65.35 | 3 | Vertical | 167 | 2.77 | - | 28.40 | 3.20 | - |

## BT-BR(1Mbps)

## 2402MHz_TX

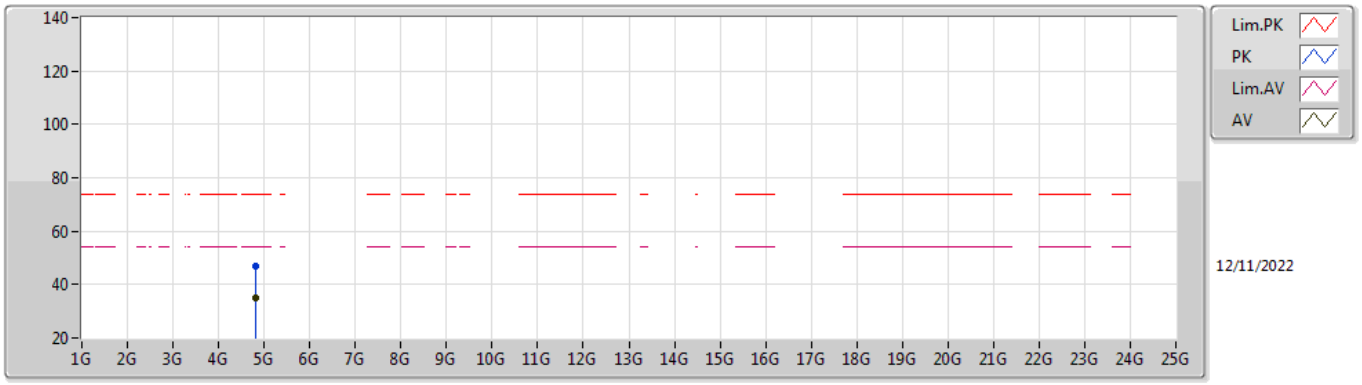



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.3694G | 55.14 | 74.00 | -18.86 | 23.62 | 3 | Horizontal | 210 | 2.21 | - | 28.34 | 3.18 | - |
| AV | 2.39G | 43.73 | 54.00 | -10.27 | 12.15 | 3 | Horizontal | 210 | 2.21 | - | 28.38 | 3.20 | - |
| PK | 2.4018G | 100.84 | Inf | -Inf | 69.24 | 3 | Horizontal | 210 | 2.21 | - | 28.40 | 3.20 | - |
| AV | 2.402G | 99.94 | Inf | -Inf | 68.34 | 3 | Horizontal | 210 | 2.21 | - | 28.40 | 3.20 | - |

## BT-BR(1Mbps)

## 2402MHz_TX

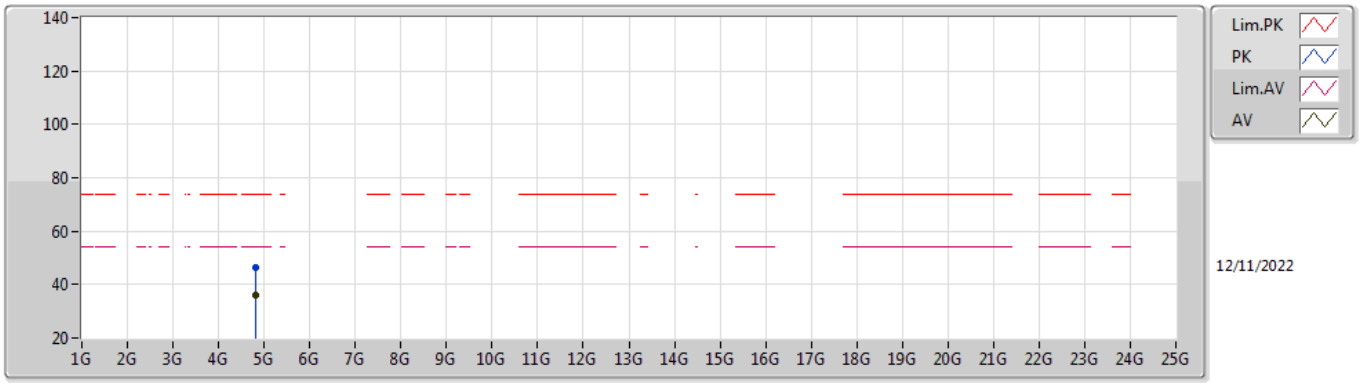



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.80362G | 46.75 | 74.00 | -27.25 | 39.14 | 3 | Vertical | 179 | 1.92 | - | 32.82 | 5.60 | 30.81 |
| AV | 4.80402G | 34.91 | 54.00 | -19.09 | 27.30 | 3 | Vertical | 179 | 1.92 | - | 32.82 | 5.60 | 30.81 |

## BT-BR(1Mbps)

## 2402MHz_TX

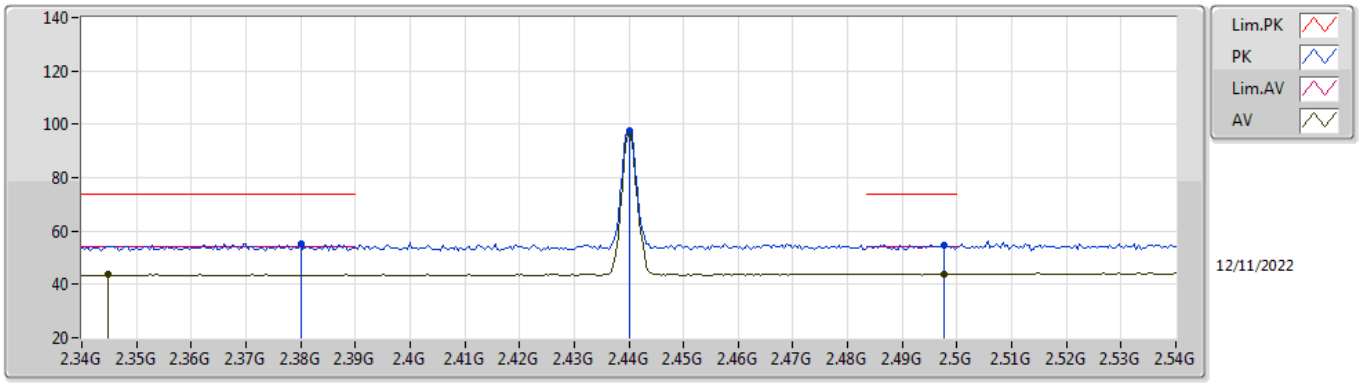



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.804G | 46.49 | 74.00 | -27.51 | 38.88 | 3 | Horizontal | 153 | 1.74 | - | 32.82 | 5.60 | 30.81 |
| AV | 4.80404G | 36.01 | 54.00 | -17.99 | 28.40 | 3 | Horizontal | 153 | 1.74 | - | 32.82 | 5.60 | 30.81 |

## BT-BR(1Mbps)

## 2440MHz_TX

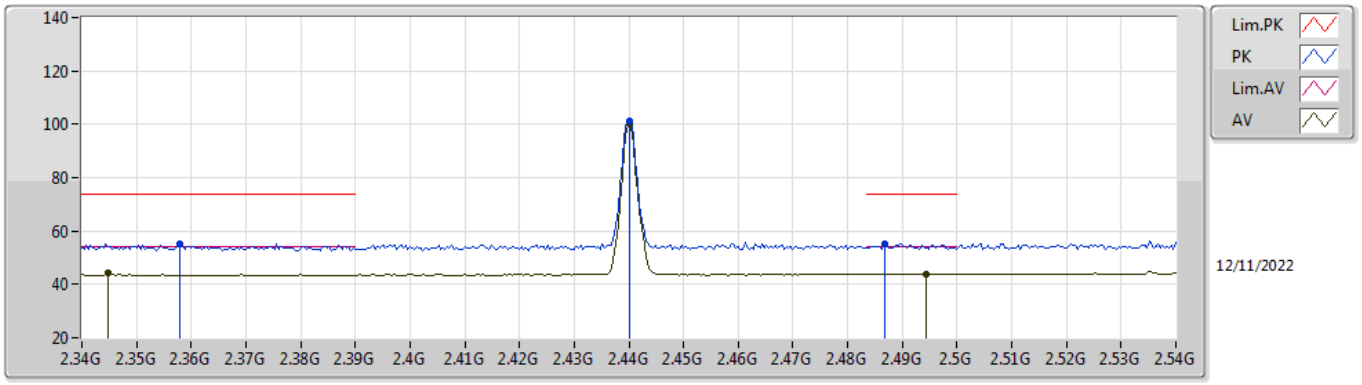



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.38G | 54.99 | 74.00 | -19.01 | 23.44 | 3 | Vertical | 202 | 1.86 | - | 28.36 | 3.19 | - |
| AV | 2.3448G | 43.82 | 54.00 | -10.18 | 12.37 | 3 | Vertical | 202 | 1.86 | - | 28.28 | 3.17 | - |
| PK | 2.44G | 97.45 | Inf | -Inf | 65.83 | 3 | Vertical | 202 | 1.86 | - | 28.40 | 3.22 | - |
| AV | 2.44G | 96.57 | Inf | -Inf | 64.95 | 3 | Vertical | 202 | 1.86 | - | 28.40 | 3.22 | - |
| PK | 2.4976G | 54.80 | 74.00 | -19.20 | 22.96 | 3 | Vertical | 202 | 1.86 | - | 28.59 | 3.25 | - |
| AV | 2.4976G | 43.93 | 54.00 | -10.07 | 12.09 | 3 | Vertical | 202 | 1.86 | - | 28.59 | 3.25 | - |

## BT-BR(1Mbps)

## 2440MHz_TX

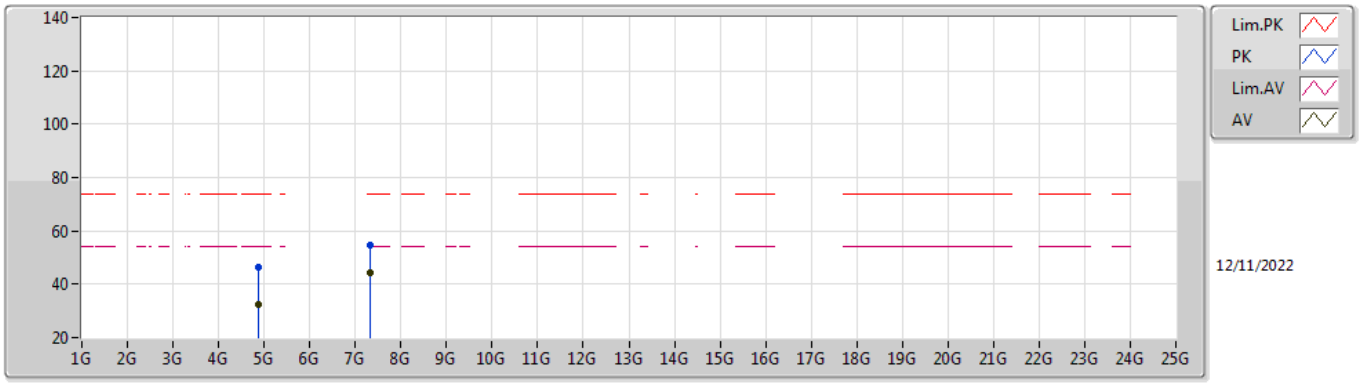



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.358G | 55.30 | 74.00 | -18.70 | 23.80 | 3 | Horizontal | 210 | 2.15 | - | 28.32 | 3.18 | - |
| AV | 2.3448G | 44.15 | 54.00 | -9.85 | 12.70 | 3 | Horizontal | 210 | 2.15 | - | 28.28 | 3.17 | - |
| PK | 2.44G | 101.22 | Inf | -Inf | 69.60 | 3 | Horizontal | 210 | 2.15 | - | 28.40 | 3.22 | - |
| AV | 2.44G | 100.31 | Inf | -Inf | 68.69 | 3 | Horizontal | 210 | 2.15 | - | 28.40 | 3.22 | - |
| PK | 2.4868G | 55.43 | 74.00 | -18.57 | 23.64 | 3 | Horizontal | 210 | 2.15 | - | 28.55 | 3.24 | - |
| AV | 2.4944G | 43.95 | 54.00 | -10.05 | 12.12 | 3 | Horizontal | 210 | 2.15 | - | 28.58 | 3.25 | - |

## BT-BR(1Mbps)

## 2440MHz_TX

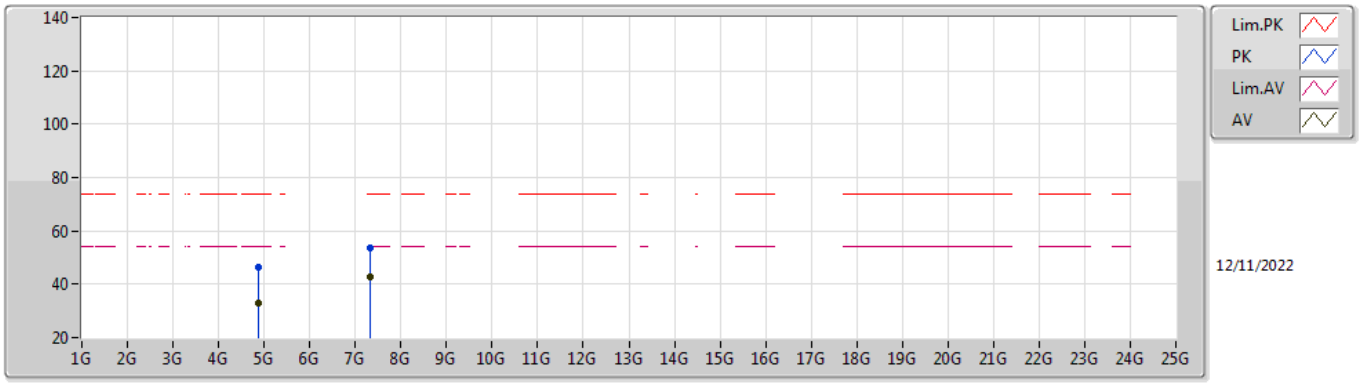



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.87983G | 46.16 | 74.00 | -27.84 | 38.14 | 3 | Vertical | 63 | 3.00 | - | 33.16 | 5.64 | 30.78 |
| AV | 4.8795G | 32.55 | 54.00 | -21.45 | 24.53 | 3 | Vertical | 63 | 3.00 | - | 33.16 | 5.64 | 30.78 |
| PK | 7.3197G | 54.63 | 74.00 | -19.37 | 43.28 | 3 | Vertical | 299 | 2.60 | - | 36.44 | 6.84 | 31.93 |
| AV | 7.31967G | 44.50 | 54.00 | -9.50 | 33.15 | 3 | Vertical | 299 | 2.60 | - | 36.44 | 6.84 | 31.93 |

## BT-BR(1Mbps)

## 2440MHz_TX

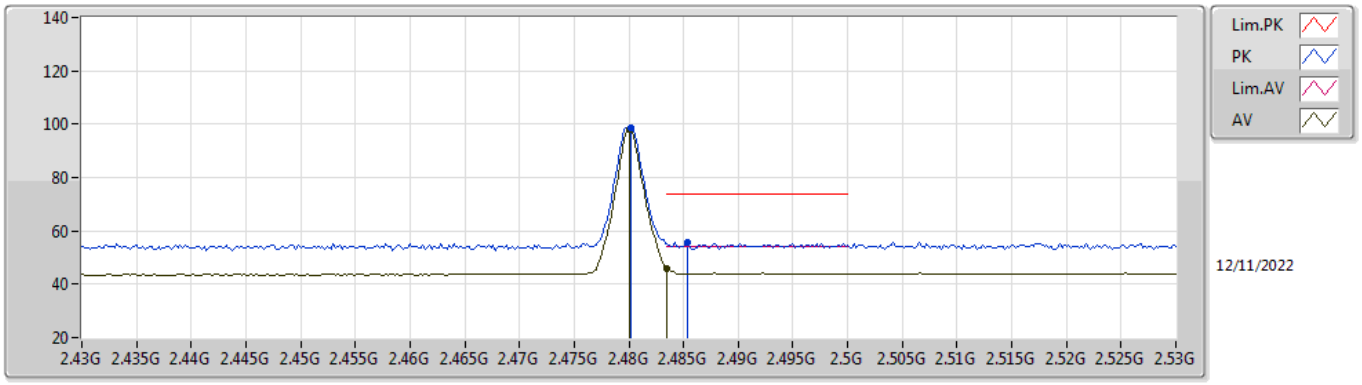



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.88208G | 46.45 | 74.00 | -27.55 | 38.43 | 3 | Horizontal | 221 | 1.80 | - | 33.16 | 5.64 | 30.78 |
| AV | 4.88005G | 33.05 | 54.00 | -20.95 | 25.03 | 3 | Horizontal | 221 | 1.80 | - | 33.16 | 5.64 | 30.78 |
| PK | 7.31944G | 53.68 | 74.00 | -20.32 | 42.33 | 3 | Horizontal | 186 | 1.07 | - | 36.44 | 6.84 | 31.93 |
| AV | 7.32045G | 42.66 | 54.00 | -11.34 | 31.31 | 3 | Horizontal | 186 | 1.07 | - | 36.44 | 6.84 | 31.93 |

## BT-BR(1Mbps)

## 2480MHz_TX

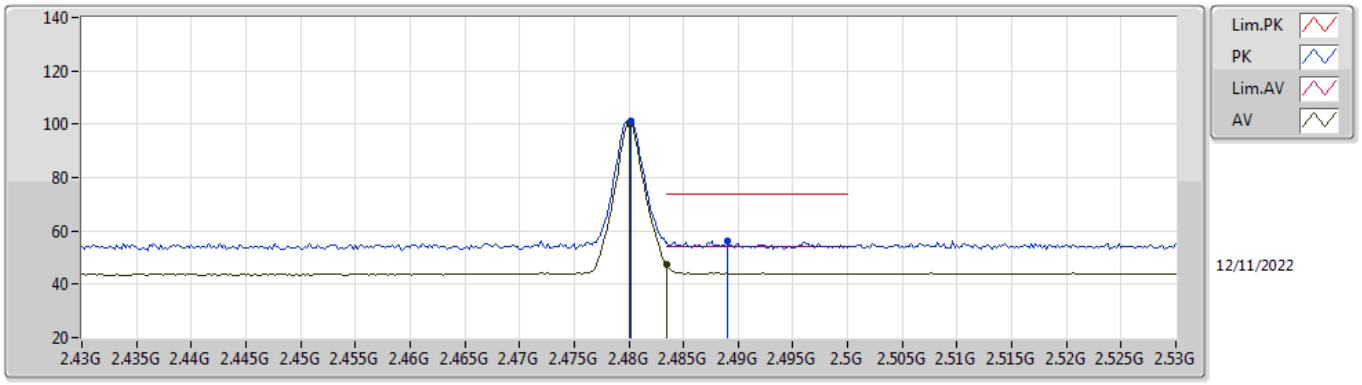



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.4802G | 98.77 | Inf | -Inf | 67.01 | 3 | Vertical | 189 | 1.41 | - | 28.52 | 3.24 | - |
| AV | 2.48G | 97.93 | Inf | -Inf | 66.17 | 3 | Vertical | 189 | 1.41 | - | 28.52 | 3.24 | - |
| PK | 2.4854G | 55.71 | 74.00 | -18.29 | 23.93 | 3 | Vertical | 189 | 1.41 | - | 28.54 | 3.24 | - |
| AV | 2.4835G | 46.04 | 54.00 | -7.96 | 14.27 | 3 | Vertical | 189 | 1.41 | - | 28.53 | 3.24 | - |

## BT-BR(1Mbps)

## 2480MHz_TX

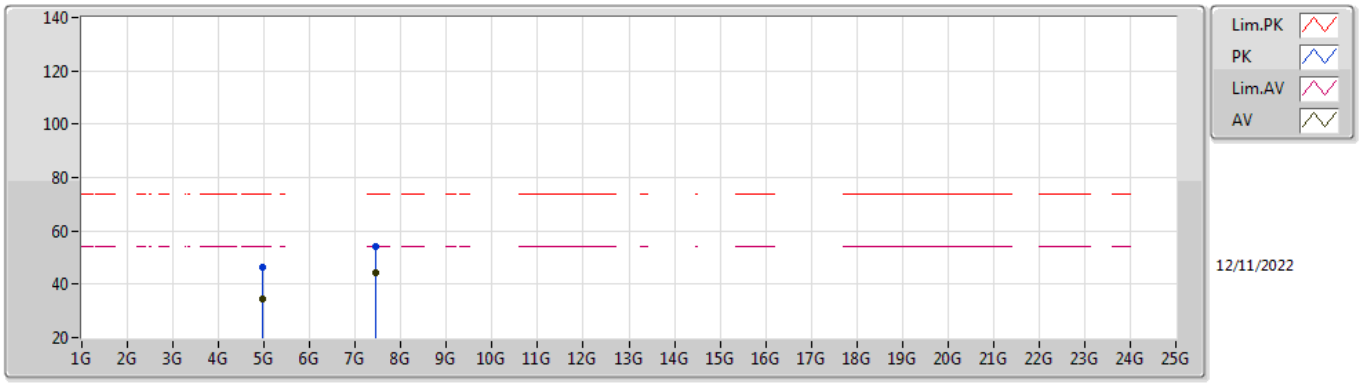



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.4802G | 101.14 | Inf | -Inf | 69.38 | 3 | Horizontal | 212 | 1.74 | - | 28.52 | 3.24 | - |
| AV | 2.48G | 100.24 | Inf | -Inf | 68.48 | 3 | Horizontal | 212 | 1.74 | - | 28.52 | 3.24 | - |
| PK | 2.489G | 55.98 | 74.00 | -18.02 | 24.18 | 3 | Horizontal | 212 | 1.74 | - | 28.56 | 3.24 | - |
| AV | 2.4835G | 47.37 | 54.00 | -6.63 | 15.60 | 3 | Horizontal | 212 | 1.74 | - | 28.53 | 3.24 | - |

## BT-BR(1Mbps)

## 2480MHz_TX

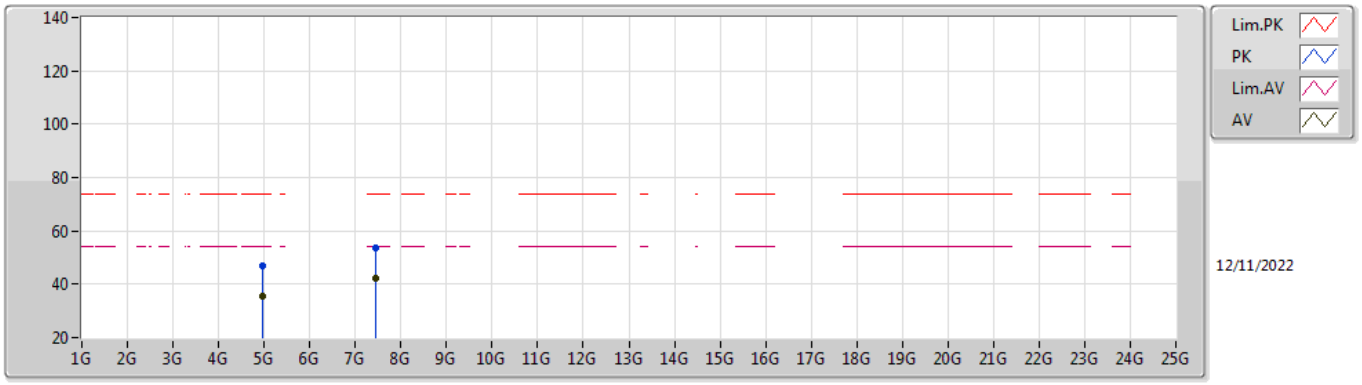



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.95987G | 46.54 | 74.00 | -27.46 | 38.29 | 3 | Vertical | 7 | 2.55 | - | 33.32 | 5.68 | 30.75 |
| AV | 4.96009G | 34.48 | 54.00 | -19.52 | 26.23 | 3 | Vertical | 7 | 2.55 | - | 33.32 | 5.68 | 30.75 |
| PK | 7.44042G | 54.04 | 74.00 | -19.96 | 42.70 | 3 | Vertical | 202 | 1.78 | - | 36.50 | 6.84 | 32.00 |
| AV | 7.44001G | 44.20 | 54.00 | -9.80 | 32.86 | 3 | Vertical | 202 | 1.78 | - | 36.50 | 6.84 | 32.00 |

## BT-BR(1Mbps)

## 2480MHz_TX

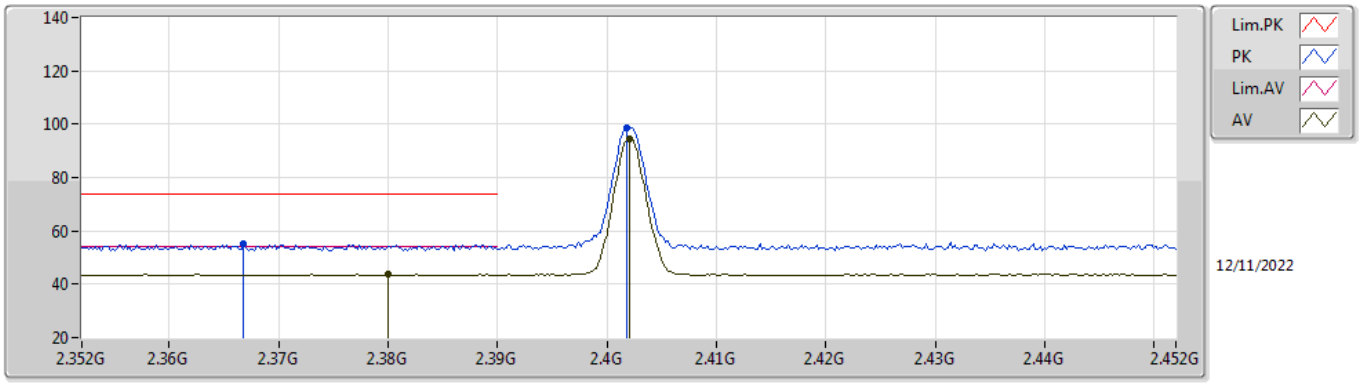



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.96027G | 47.15 | 74.00 | -26.85 | 38.90 | 3 | Horizontal | 222 | 1.98 | - | 33.32 | 5.68 | 30.75 |
| AV | 4.9599G | 35.60 | 54.00 | -18.40 | 27.35 | 3 | Horizontal | 222 | 1.98 | - | 33.32 | 5.68 | 30.75 |
| PK | 7.43953G | 53.67 | 74.00 | -20.33 | 42.32 | 3 | Horizontal | 158 | 2.09 | - | 36.50 | 6.84 | 31.99 |
| AV | 7.43994G | 42.11 | 54.00 | -11.89 | 30.77 | 3 | Horizontal | 158 | 2.09 | - | 36.50 | 6.84 | 32.00 |

## BT-EDR(3Mbps)

## 2402MHz_TX

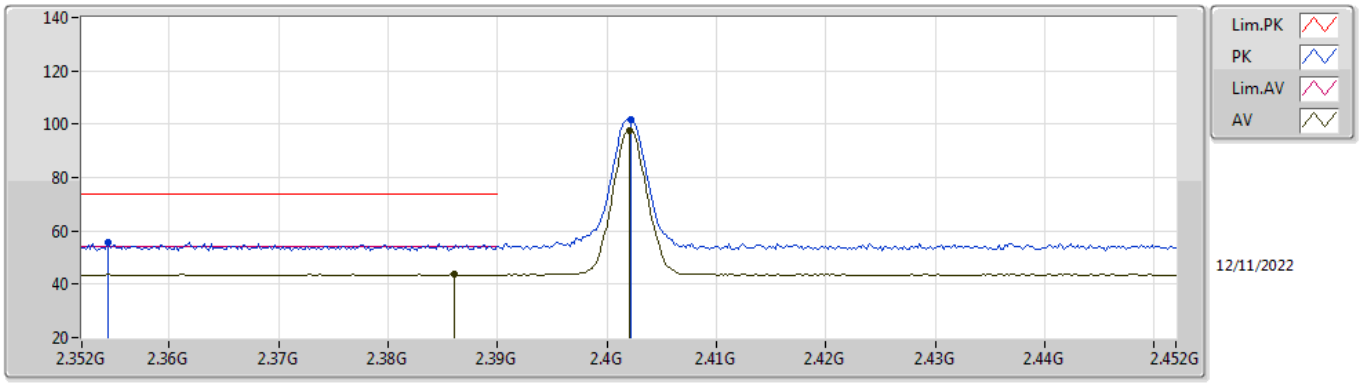



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.3668G | 55.02 | 74.00 | -18.98 | 23.51 | 3 | Vertical | 191 | 1.10 | - | 28.33 | 3.18 | - |
| AV | 2.38G | 43.74 | 54.00 | -10.26 | 12.19 | 3 | Vertical | 191 | 1.10 | - | 28.36 | 3.19 | - |
| PK | 2.4018G | 98.52 | Inf | -Inf | 66.92 | 3 | Vertical | 191 | 1.10 | - | 28.40 | 3.20 | - |
| AV | 2.402G | 94.41 | Inf | -Inf | 62.81 | 3 | Vertical | 191 | 1.10 | - | 28.40 | 3.20 | - |

## BT-EDR(3Mbps)

## 2402MHz_TX

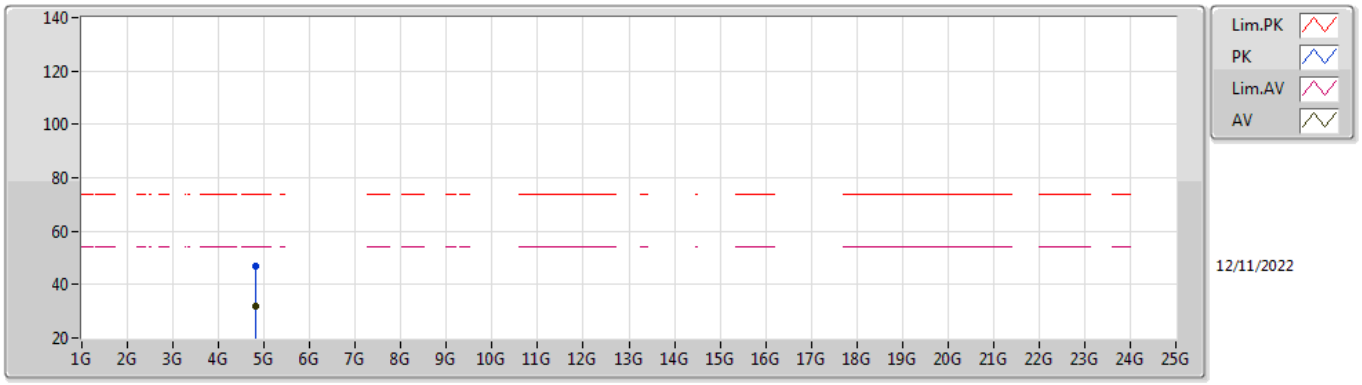



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.3544G | 55.86 | 74.00 | -18.14 | 24.37 | 3 | Horizontal | 211 | 2.23 | - | 28.31 | 3.18 | - |
| AV | 2.386G | 43.61 | 54.00 | -10.39 | 12.05 | 3 | Horizontal | 211 | 2.23 | - | 28.37 | 3.19 | - |
| PK | 2.4022G | 101.78 | Inf | -Inf | 70.18 | 3 | Horizontal | 211 | 2.23 | - | 28.40 | 3.20 | - |
| AV | 2.402G | 97.63 | Inf | -Inf | 66.03 | 3 | Horizontal | 211 | 2.23 | - | 28.40 | 3.20 | - |

## BT-EDR(3Mbps)

## 2402MHz_TX

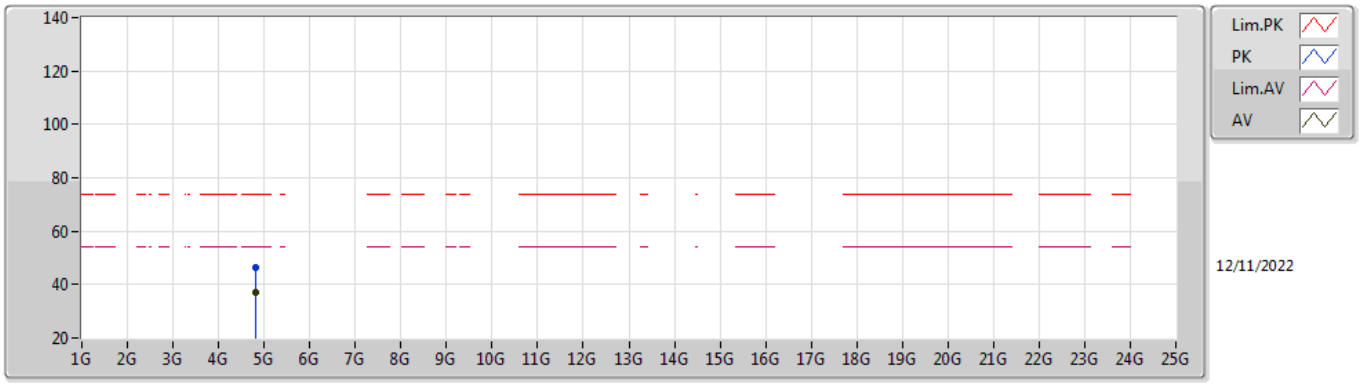



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.80548G | 46.79 | 74.00 | -27.21 | 39.17 | 3 | Vertical | 176 | 2.65 | - | 32.83 | 5.60 | 30.81 |
| AV | 4.80386G | 31.94 | 54.00 | -22.06 | 24.33 | 3 | Vertical | 176 | 2.65 | - | 32.82 | 5.60 | 30.81 |

## BT-EDR(3Mbps)

## 2402MHz_TX

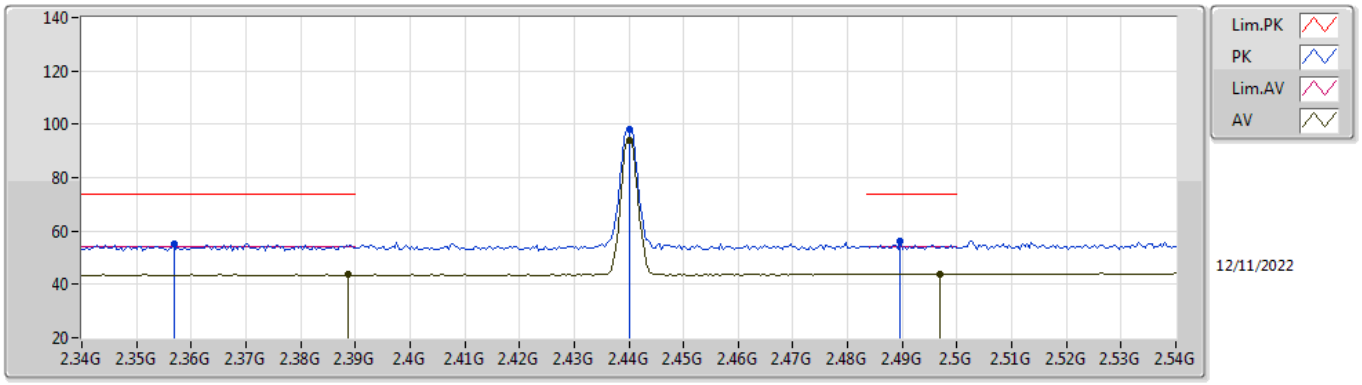



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.80136G | 46.13 | 74.00 | -27.87 | 38.53 | 3 | Horizontal | 106 | 1.78 | - | 32.81 | 5.60 | 30.81 |
| AV | 4.80176G | 36.90 | 54.00 | -17.10 | 29.30 | 3 | Horizontal | 106 | 1.78 | - | 32.81 | 5.60 | 30.81 |

## BT-EDR(3Mbps)

## 2440MHz_TX

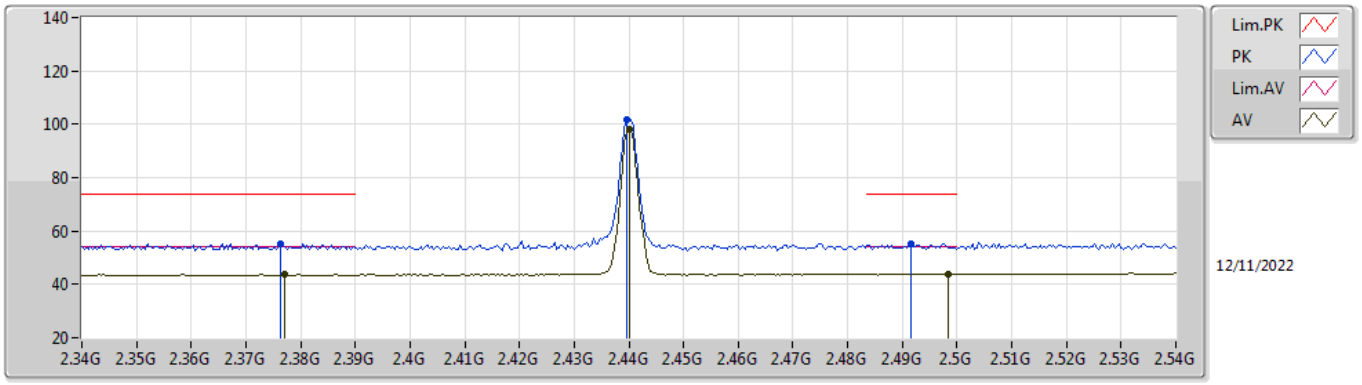



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) | |
| PK | 2.3568G | 55.34 | 74.00 | -18.66 | 23.85 | 3 | Vertical | 191 | 1.86 | - | 28.31 | 3.18 | - | |
| AV | 2.3888G | 43.67 | 54.00 | -10.33 | 12.10 | 3 | Vertical | 191 | 1.86 | - | 28.38 | 3.19 | - | |
| PK | 2.44G | 98.35 | Inf | -Inf | 66.73 | 3 | Vertical | 191 | 1.86 | - | 28.40 | 3.22 | - | |
| AV | 2.44G | 94.22 | Inf | -Inf | 62.60 | 3 | Vertical | 191 | 1.86 | - | 28.40 | 3.22 | - | |
| PK | 2.4896G | 55.95 | 74.00 | -18.05 | 24.15 | 3 | Vertical | 191 | 1.86 | - | 28.56 | 3.24 | - | |
| AV | 2.4968G | 43.88 | 54.00 | -10.12 | 12.04 | 3 | Vertical | 191 | 1.86 | - | 28.59 | 3.25 | - | |

## BT-EDR(3Mbps)

## 2440MHz_TX

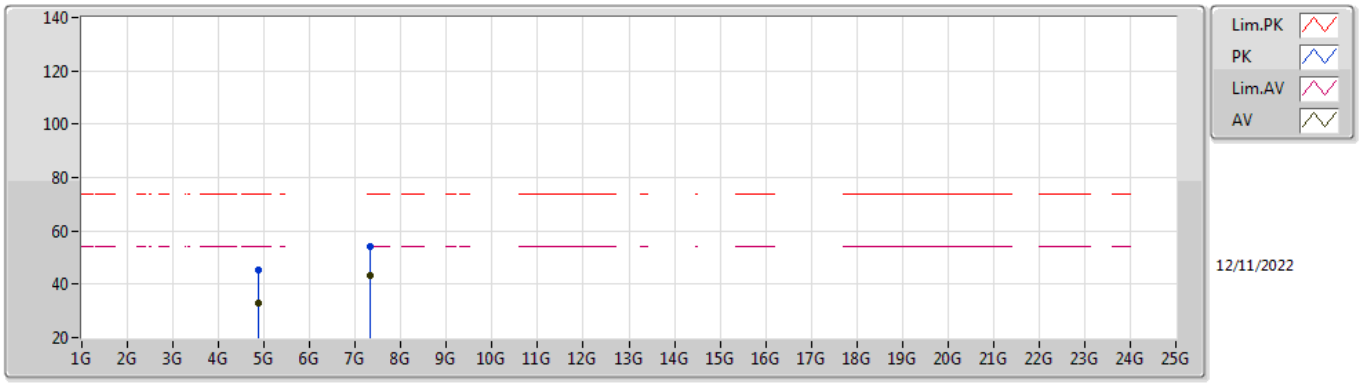



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.3764G | 55.42 | 74.00 | -18.58 | 23.88 | 3 | Horizontal | 211 | 2.15 | - | 28.35 | 3.19 | - |
| AV | 2.3772G | 43.63 | 54.00 | -10.37 | 12.09 | 3 | Horizontal | 211 | 2.15 | - | 28.35 | 3.19 | - |
| PK | 2.4396G | 101.97 | Inf | -Inf | 70.35 | 3 | Horizontal | 211 | 2.15 | - | 28.40 | 3.22 | - |
| AV | 2.44G | 97.90 | Inf | -Inf | 66.28 | 3 | Horizontal | 211 | 2.15 | - | 28.40 | 3.22 | - |
| PK | 2.4916G | 55.24 | 74.00 | -18.76 | 23.42 | 3 | Horizontal | 211 | 2.15 | - | 28.57 | 3.25 | - |
| AV | 2.4984G | 43.97 | 54.00 | -10.03 | 12.13 | 3 | Horizontal | 211 | 2.15 | - | 28.59 | 3.25 | - |

## BT-EDR(3Mbps)

## 2440MHz_TX

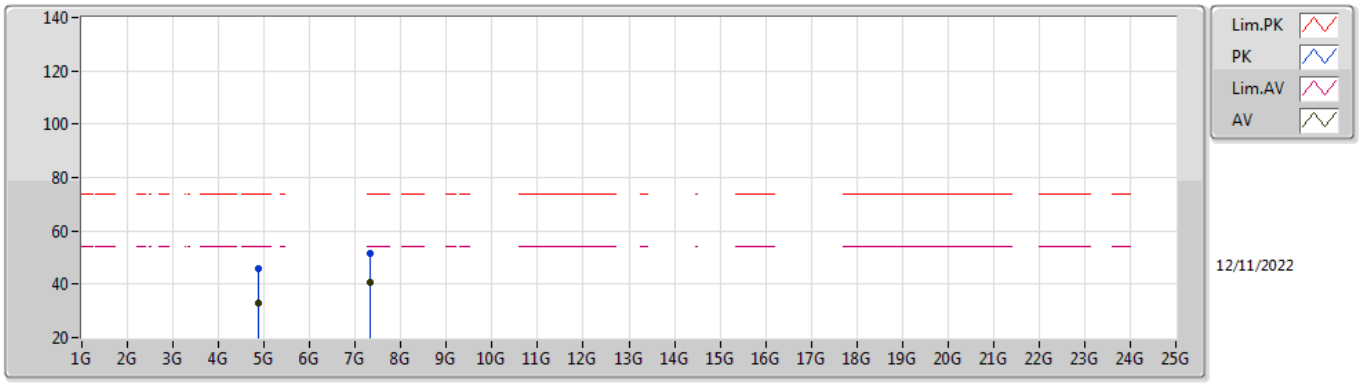



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.88292G | 45.48 | 74.00 | -28.52 | 37.45 | 3 | Vertical | 11 | 1.27 | - | 33.17 | 5.64 | 30.78 |
| AV | 4.88036G | 32.83 | 54.00 | -21.17 | 24.81 | 3 | Vertical | 11 | 1.27 | - | 33.16 | 5.64 | 30.78 |
| PK | 7.31992G | 54.23 | 74.00 | -19.77 | 42.88 | 3 | Vertical | 228 | 1.39 | - | 36.44 | 6.84 | 31.93 |
| AV | 7.31996G | 43.52 | 54.00 | -10.48 | 32.17 | 3 | Vertical | 228 | 1.39 | - | 36.44 | 6.84 | 31.93 |

## BT-EDR(3Mbps)

## 2440MHz_TX

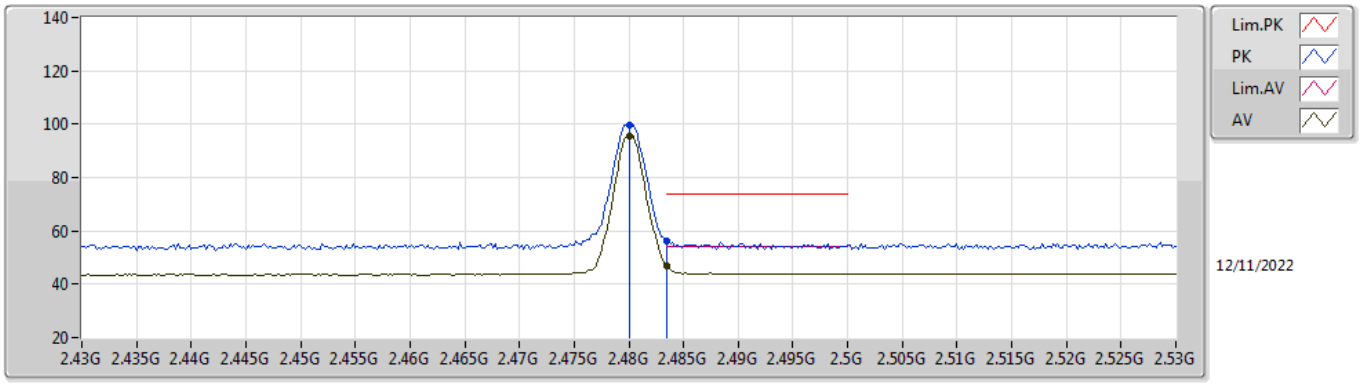



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.87646G | 45.83 | 74.00 | -28.17 | 37.82 | 3 | Horizontal | 271 | 1.35 | - | 33.15 | 5.64 | 30.78 |
| AV | 4.8799G | 32.68 | 54.00 | -21.32 | 24.66 | 3 | Horizontal | 271 | 1.35 | - | 33.16 | 5.64 | 30.78 |
| PK | 7.31916G | 51.58 | 74.00 | -22.42 | 40.23 | 3 | Horizontal | 257 | 2.37 | - | 36.44 | 6.84 | 31.93 |
| AV | 7.32G | 40.61 | 54.00 | -13.39 | 29.26 | 3 | Horizontal | 257 | 2.37 | - | 36.44 | 6.84 | 31.93 |

## BT-EDR(3Mbps)

## 2480MHz_TX

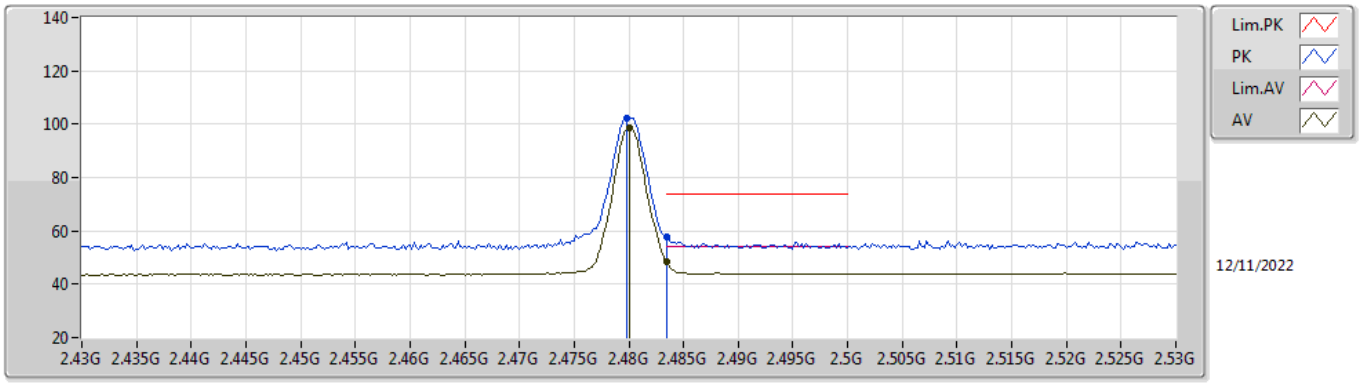



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.48G | 99.80 | Inf | -Inf | 68.04 | 3 | Vertical | 189 | 1.42 | - | 28.52 | 3.24 | - |
| AV | 2.48G | 95.74 | Inf | -Inf | 63.98 | 3 | Vertical | 189 | 1.42 | - | 28.52 | 3.24 | - |
| PK | 2.4835G | 56.31 | 74.00 | -17.69 | 24.54 | 3 | Vertical | 189 | 1.42 | - | 28.53 | 3.24 | - |
| AV | 2.4835G | 46.88 | 54.00 | -7.12 | 15.11 | 3 | Vertical | 189 | 1.42 | - | 28.53 | 3.24 | - |

## BT-EDR(3Mbps)

## 2480MHz_TX

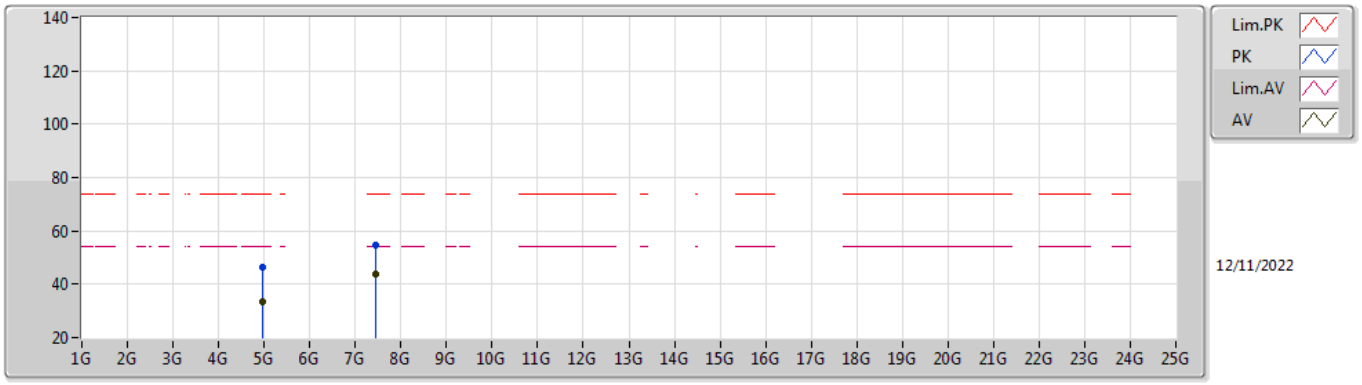



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.4798G | 102.50 | Inf | -Inf | 70.74 | 3 | Horizontal | 210 | 2.06 | - | 28.52 | 3.24 | - |
| AV | 2.48G | 98.44 | Inf | -Inf | 66.68 | 3 | Horizontal | 210 | 2.06 | - | 28.52 | 3.24 | - |
| PK | 2.4835G | 57.82 | 74.00 | -16.18 | 26.05 | 3 | Horizontal | 210 | 2.06 | - | 28.53 | 3.24 | - |
| AV | 2.4835G | 48.50 | 54.00 | -5.50 | 16.73 | 3 | Horizontal | 210 | 2.06 | - | 28.53 | 3.24 | - |

## BT-EDR(3Mbps)

## 2480MHz_TX

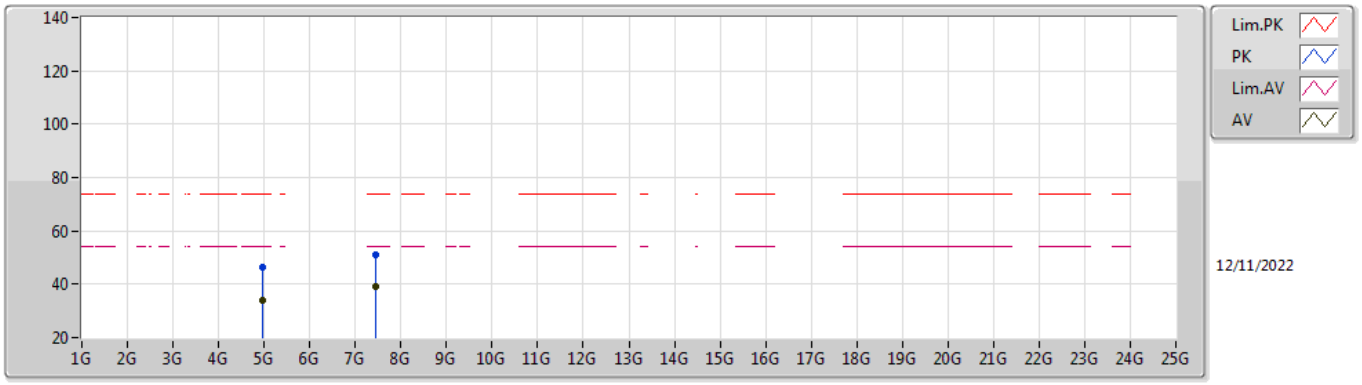



EUT Y_1TX
Setting 4
02-F-G-2

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.95981G | 46.23 | 74.00 | -27.77 | 37.98 | 3 | Vertical | 176 | 1.07 | - | 33.32 | 5.68 | 30.75 |
| AV | 4.96004G | 33.43 | 54.00 | -20.57 | 25.18 | 3 | Vertical | 176 | 1.07 | - | 33.32 | 5.68 | 30.75 |
| PK | 7.44003G | 54.45 | 74.00 | -19.55 | 43.11 | 3 | Vertical | 203 | 1.71 | - | 36.50 | 6.84 | 32.00 |
| AV | 7.44007G | 43.80 | 54.00 | -10.20 | 32.46 | 3 | Vertical | 203 | 1.71 | - | 36.50 | 6.84 | 32.00 |

## BT-EDR(3Mbps)

## 2480MHz_TX




EUT Y_1TX
Setting 4
02-F-G-2

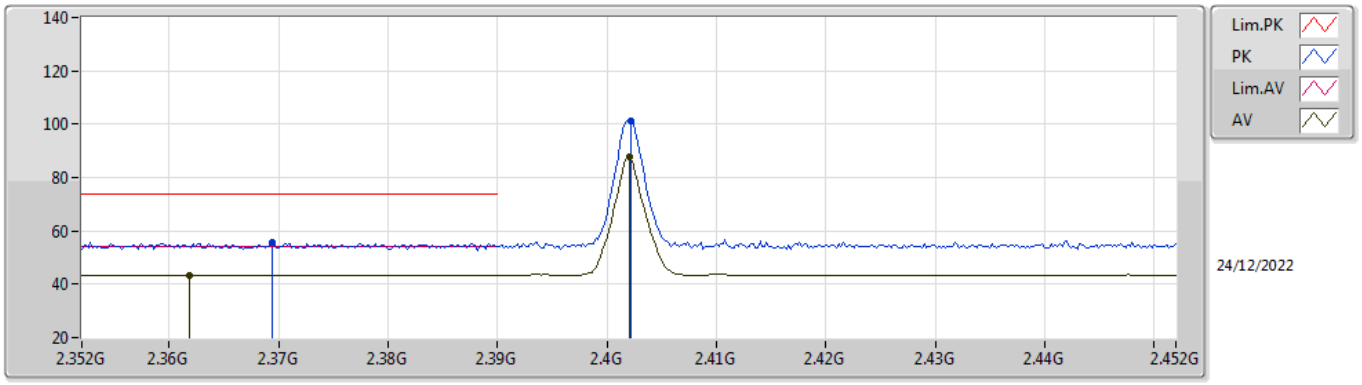
| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.95962G | 46.57 | 74.00 | -27.43 | 38.32 | 3 | Horizontal | 174 | 1.78 | - | 33.32 | 5.68 | 30.75 |
| AV | 4.96007G | 34.06 | 54.00 | -19.94 | 25.81 | 3 | Horizontal | 174 | 1.78 | - | 33.32 | 5.68 | 30.75 |
| PK | 7.44048G | 51.16 | 74.00 | -22.84 | 39.82 | 3 | Horizontal | 236 | 1.69 | - | 36.50 | 6.84 | 32.00 |
| AV | 7.44009G | 38.91 | 54.00 | -15.09 | 27.57 | 3 | Horizontal | 236 | 1.69 | - | 36.50 | 6.84 | 32.00 |

Summary

| Mode | Result | Type | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Dist (m) | Condition | Azimuth (°) | Height (m) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.4-2.4835GHz | - | - | - | - | - | - | - | - | - | - | - |
| BT-BR(1Mbps) | Pass | AV | 2.4835G | 48.39 | 54.00 | -5.61 | 3 | Horizontal | 360 | 2.67 | - |
| BT-EDR(3Mbps) | Pass | AV | 2.4835G | 49.35 | 54.00 | -4.65 | 3 | Horizontal | 360 | 2.66 | - |

## BT-BR(1Mbps)

## 2402MHz_TX

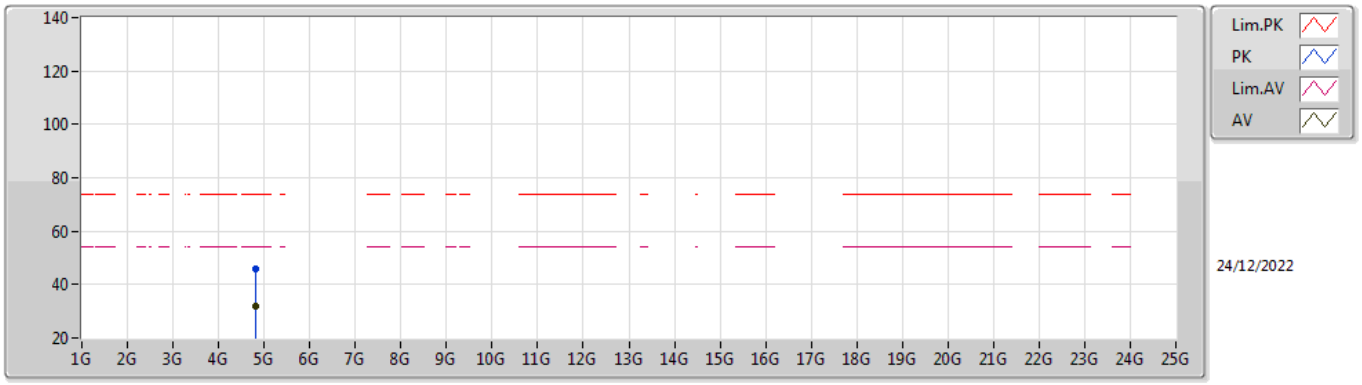



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.3694G | 55.62 | 74.00 | -18.38 | 24.31 | 3 | Horizontal | 345 | 2.31 | - | 27.74 | 3.57 | - |
| AV | 2.3618G | 43.38 | 54.00 | -10.62 | 12.10 | 3 | Horizontal | 345 | 2.31 | - | 27.72 | 3.56 | - |
| PK | 2.4022G | 101.13 | Inf | -Inf | 69.73 | 3 | Horizontal | 345 | 2.31 | - | 27.80 | 3.60 | - |
| AV | 2.402G | 87.67 | Inf | -Inf | 56.27 | 3 | Horizontal | 345 | 2.31 | - | 27.80 | 3.60 | - |

## BT-BR(1Mbps)

## 2402MHz_TX

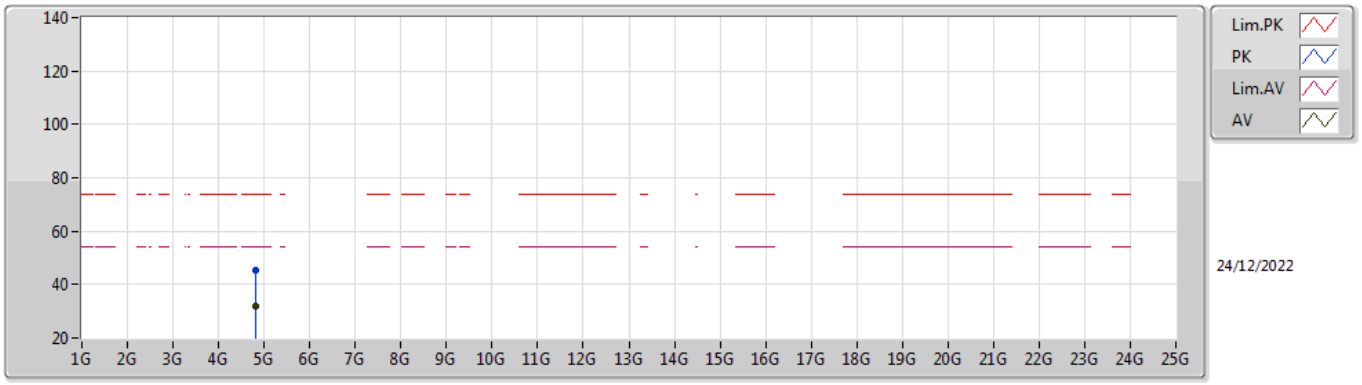



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.80314G | 45.78 | 74.00 | -28.22 | 40.25 | 3 | Vertical | 46 | 2.53 | - | 32.72 | 5.70 | 32.89 |
| AV | 4.80636G | 31.73 | 54.00 | -22.27 | 26.17 | 3 | Vertical | 46 | 2.53 | - | 32.74 | 5.71 | 32.89 |

## BT-BR(1Mbps)

## 2402MHz_TX

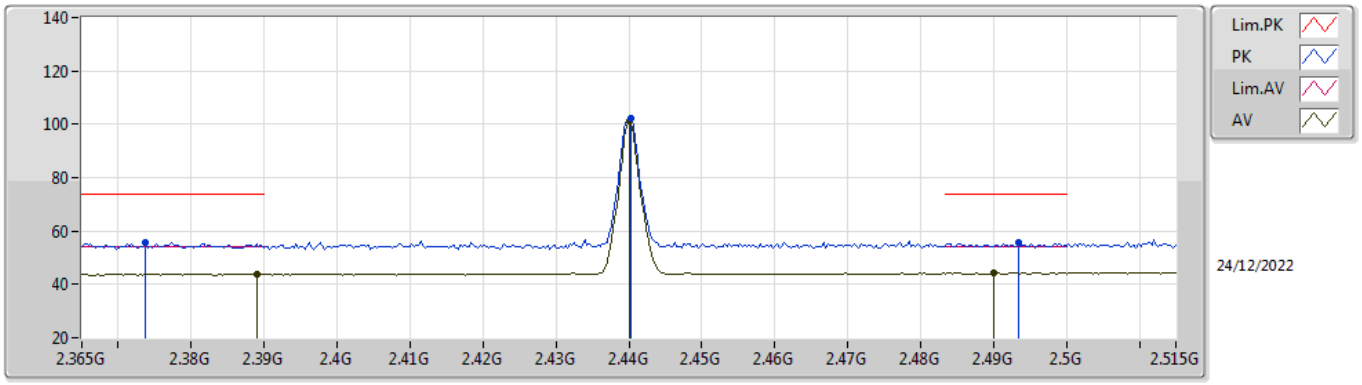



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.80445G | 45.52 | 74.00 | -28.48 | 39.98 | 3 | Horizontal | 329 | 1.02 | - | 32.73 | 5.70 | 32.89 |
| AV | 4.80393G | 32.01 | 54.00 | -21.99 | 26.48 | 3 | Horizontal | 329 | 1.02 | - | 32.72 | 5.70 | 32.89 |

## BT-BR(1Mbps)

## 2440MHz_TX

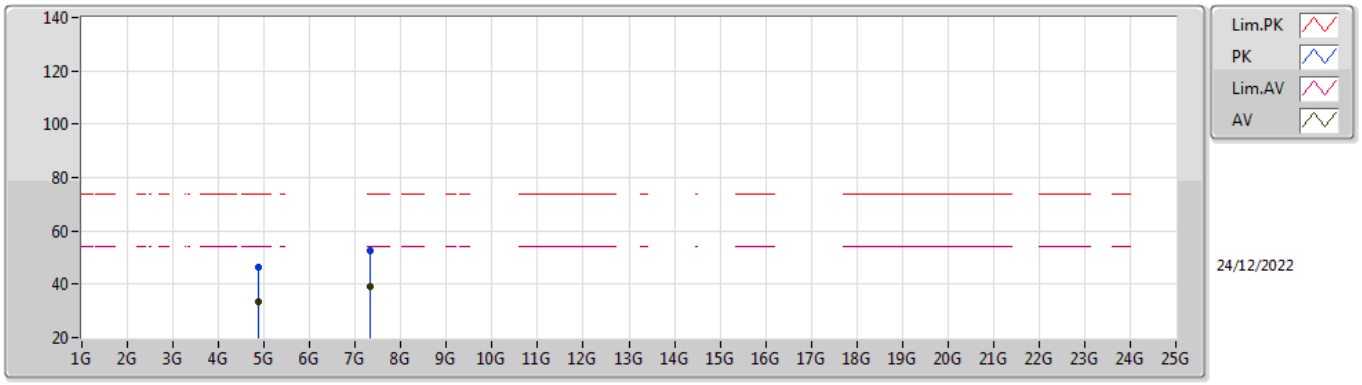



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.3737G | 55.62 | 74.00 | -18.38 | 24.30 | 3 | Horizontal | 7 | 2.26 | - | 27.75 | 3.57 | - |
| AV | 2.389G | 43.84 | 54.00 | -10.16 | 12.47 | 3 | Horizontal | 7 | 2.26 | - | 27.78 | 3.59 | - |
| PK | 2.4403G | 102.00 | Inf | -Inf | 70.50 | 3 | Horizontal | 7 | 2.26 | - | 27.88 | 3.62 | - |
| AV | 2.44G | 101.09 | Inf | -Inf | 69.59 | 3 | Horizontal | 7 | 2.26 | - | 27.88 | 3.62 | - |
| PK | 2.4934G | 55.56 | 74.00 | -18.44 | 23.75 | 3 | Horizontal | 7 | 2.26 | - | 28.16 | 3.65 | - |
| AV | 2.4901G | 44.33 | 54.00 | -9.67 | 12.54 | 3 | Horizontal | 7 | 2.26 | - | 28.14 | 3.65 | - |

## BT-BR(1Mbps)

## 2440MHz_TX

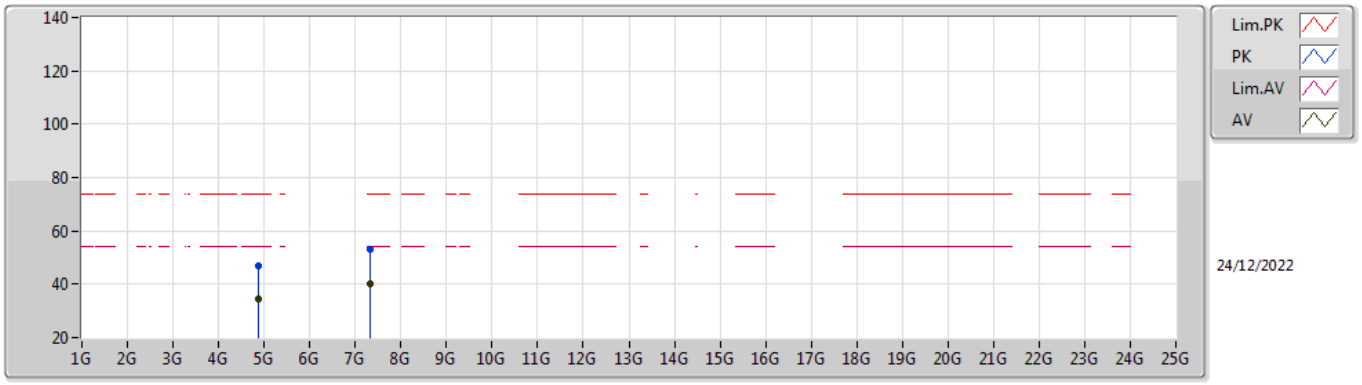



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.8819G | 46.55 | 74.00 | -27.45 | 40.64 | 3 | Vertical | 149 | 2.37 | - | 33.00 | 5.78 | 32.87 |
| AV | 4.87839G | 33.47 | 54.00 | -20.53 | 27.56 | 3 | Vertical | 149 | 2.37 | - | 33.00 | 5.78 | 32.87 |
| PK | 7.31877G | 52.60 | 74.00 | -21.40 | 41.03 | 3 | Vertical | 56 | 1.88 | - | 37.60 | 7.16 | 33.19 |
| AV | 7.31783G | 39.21 | 54.00 | -14.79 | 27.64 | 3 | Vertical | 56 | 1.88 | - | 37.60 | 7.16 | 33.19 |

## BT-BR(1Mbps)

## 2440MHz_TX

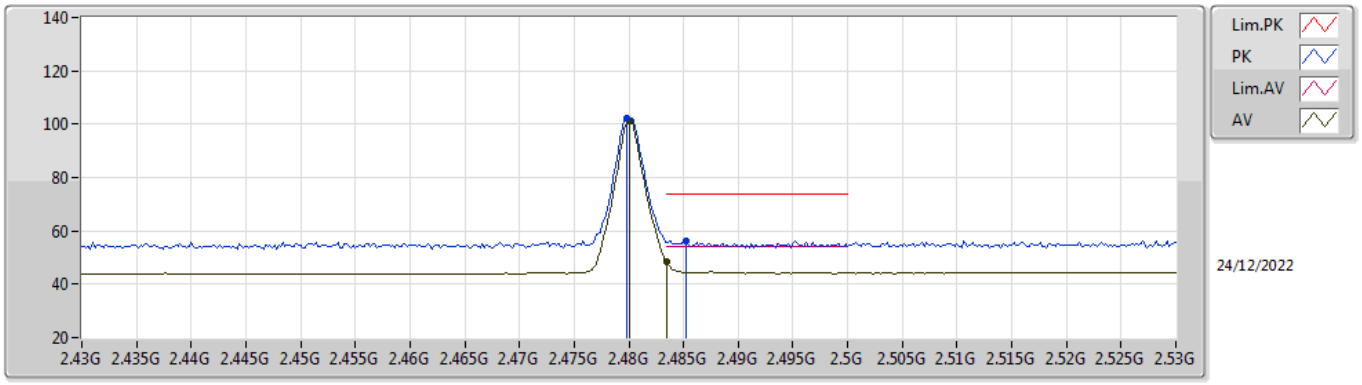



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.88157G | 46.96 | 74.00 | -27.04 | 41.05 | 3 | Horizontal | 144 | 1.62 | - | 33.00 | 5.78 | 32.87 |
| AV | 4.88012G | 34.28 | 54.00 | -19.72 | 28.37 | 3 | Horizontal | 144 | 1.62 | - | 33.00 | 5.78 | 32.87 |
| PK | 7.32039G | 52.99 | 74.00 | -21.01 | 41.42 | 3 | Horizontal | 360 | 1.80 | - | 37.60 | 7.16 | 33.19 |
| AV | 7.31957G | 40.16 | 54.00 | -13.84 | 28.59 | 3 | Horizontal | 360 | 1.80 | - | 37.60 | 7.16 | 33.19 |

## BT-BR(1Mbps)

## 2480MHz_TX

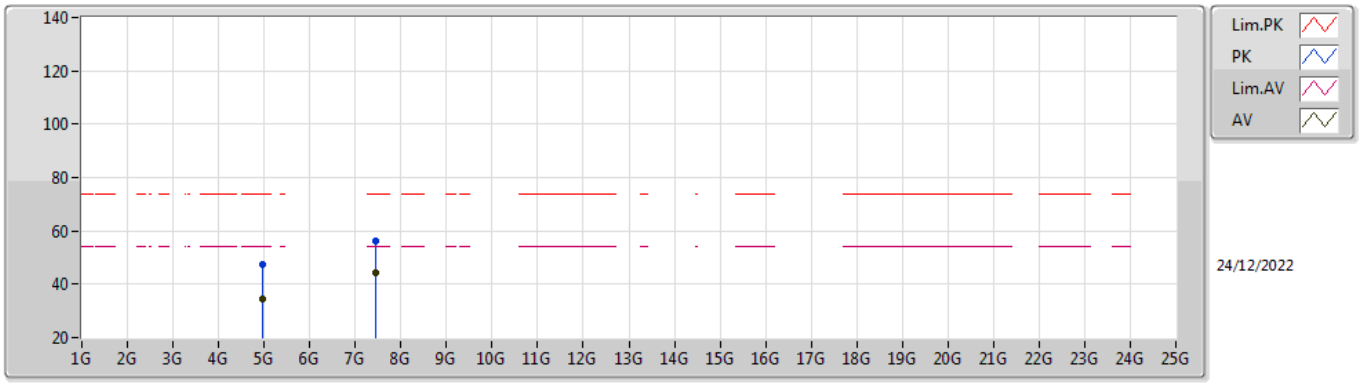



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.4798G | 102.32 | Inf | -Inf | 70.60 | 3 | Horizontal | 360 | 2.67 | - | 28.08 | 3.64 | - |
| AV | 2.48G | 101.45 | Inf | -Inf | 69.73 | 3 | Horizontal | 360 | 2.67 | - | 28.08 | 3.64 | - |
| PK | 2.4852G | 56.37 | 74.00 | -17.63 | 24.62 | 3 | Horizontal | 360 | 2.67 | - | 28.11 | 3.64 | - |
| AV | 2.4835G | 48.39 | 54.00 | -5.61 | 16.65 | 3 | Horizontal | 360 | 2.67 | - | 28.10 | 3.64 | - |

## BT-BR(1Mbps)

## 2480MHz_TX

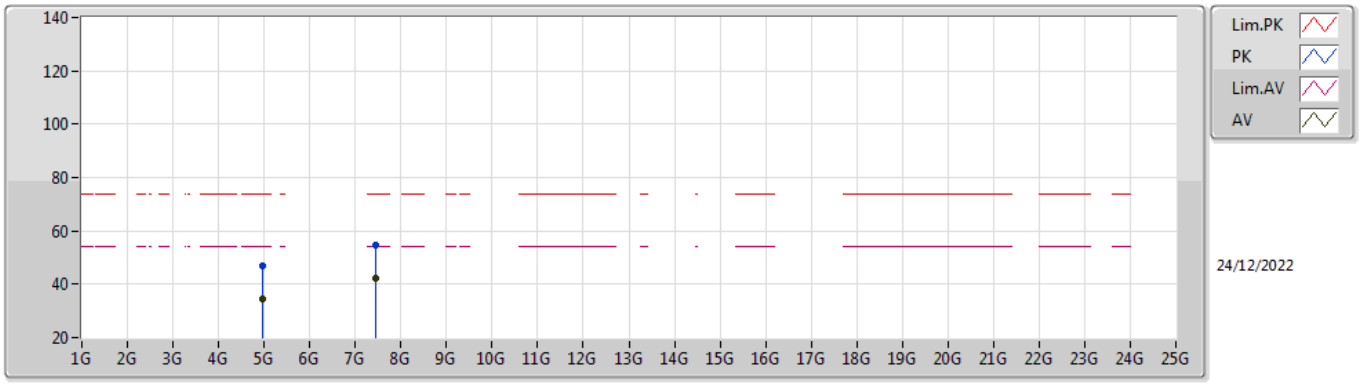



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.96011G | 47.38 | 74.00 | -26.62 | 41.36 | 3 | Vertical | 117 | 1.82 | - | 33.02 | 5.86 | 32.86 |
| AV | 4.95982G | 34.40 | 54.00 | -19.60 | 28.38 | 3 | Vertical | 117 | 1.82 | - | 33.02 | 5.86 | 32.86 |
| PK | 7.43951G | 56.01 | 74.00 | -17.99 | 44.54 | 3 | Vertical | 82 | 3.00 | - | 37.50 | 7.22 | 33.25 |
| AV | 7.44008G | 44.37 | 54.00 | -9.63 | 32.90 | 3 | Vertical | 82 | 3.00 | - | 37.50 | 7.22 | 33.25 |

## BT-BR(1Mbps)

## 2480MHz_TX

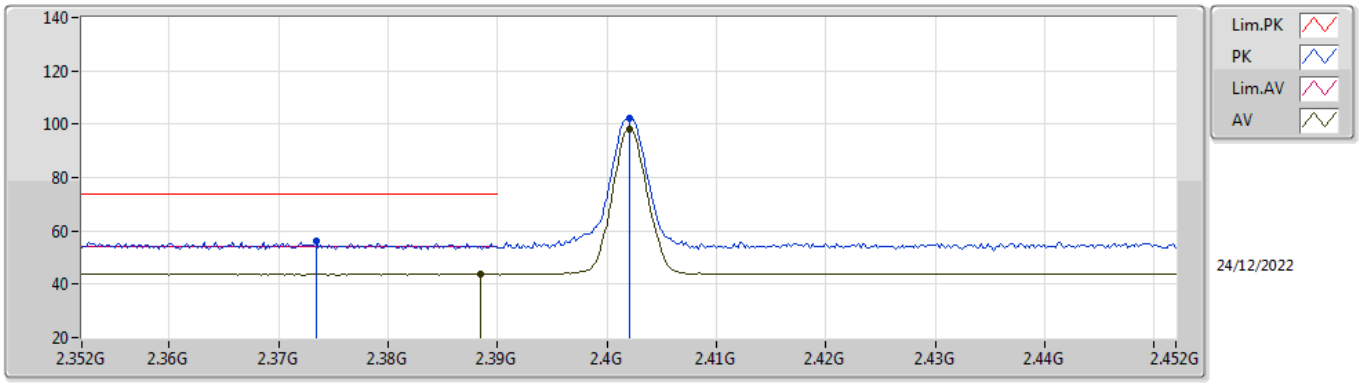



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.9599G | 46.90 | 74.00 | -27.10 | 40.88 | 3 | Horizontal | 75 | 2.76 | - | 33.02 | 5.86 | 32.86 |
| AV | 4.96001G | 34.59 | 54.00 | -19.41 | 28.57 | 3 | Horizontal | 75 | 2.76 | - | 33.02 | 5.86 | 32.86 |
| PK | 7.44033G | 54.85 | 74.00 | -19.15 | 43.38 | 3 | Horizontal | 7 | 2.74 | - | 37.50 | 7.22 | 33.25 |
| AV | 7.44G | 42.21 | 54.00 | -11.79 | 30.74 | 3 | Horizontal | 7 | 2.74 | - | 37.50 | 7.22 | 33.25 |

## BT-EDR(3Mbps)

## 2402MHz_TX

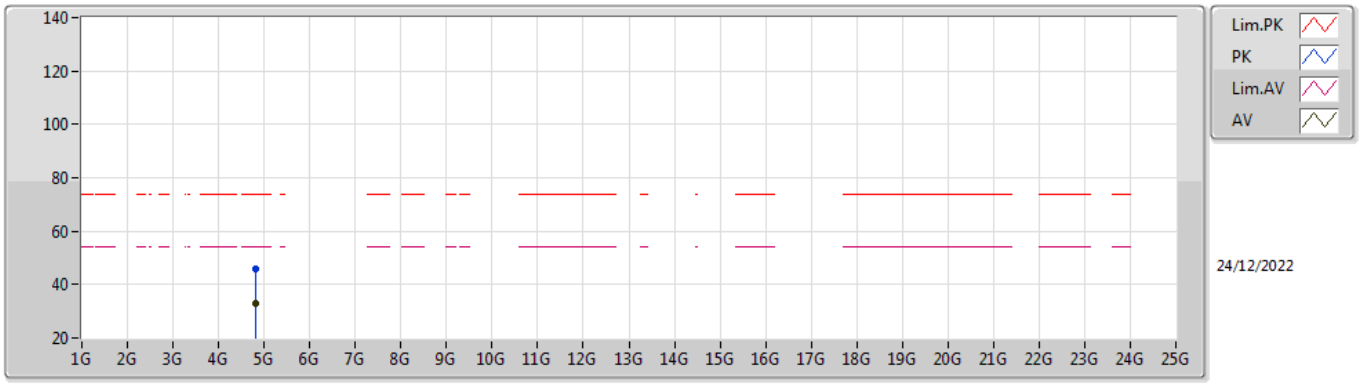



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.3734G | 56.35 | 74.00 | -17.65 | 25.03 | 3 | Horizontal | 7 | 2.32 | - | 27.75 | 3.57 | - |
| AV | 2.3884G | 43.96 | 54.00 | -10.04 | 12.59 | 3 | Horizontal | 7 | 2.32 | - | 27.78 | 3.59 | - |
| PK | 2.402G | 102.04 | Inf | -Inf | 70.64 | 3 | Horizontal | 7 | 2.32 | - | 27.80 | 3.60 | - |
| AV | 2.402G | 97.90 | Inf | -Inf | 66.50 | 3 | Horizontal | 7 | 2.32 | - | 27.80 | 3.60 | - |

## BT-EDR(3Mbps)

## 2402MHz_TX

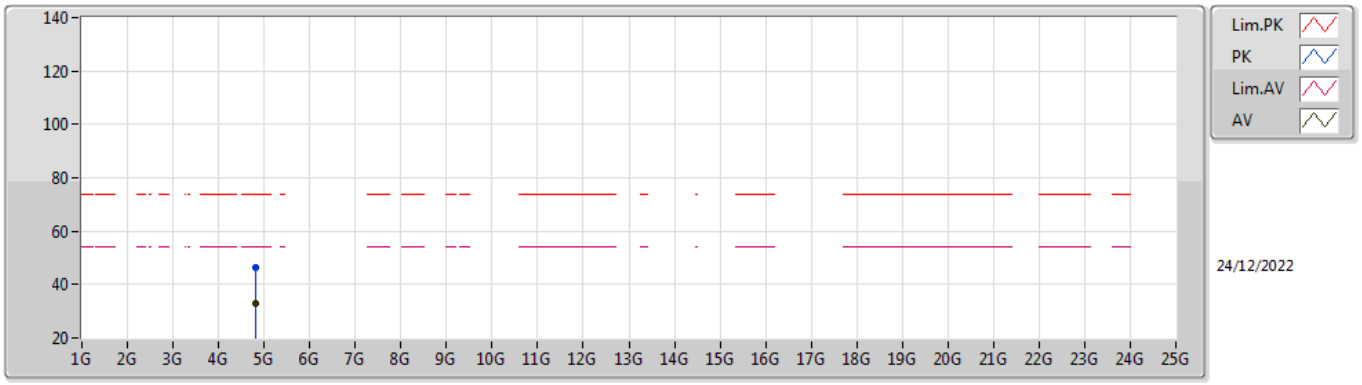



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.803G | 46.02 | 74.00 | -27.98 | 40.49 | 3 | Vertical | 61 | 2.94 | - | 32.72 | 5.70 | 32.89 |
| AV | 4.81324G | 32.88 | 54.00 | -21.12 | 27.28 | 3 | Vertical | 61 | 2.94 | - | 32.78 | 5.71 | 32.89 |

## BT-EDR(3Mbps)

## 2402MHz_TX

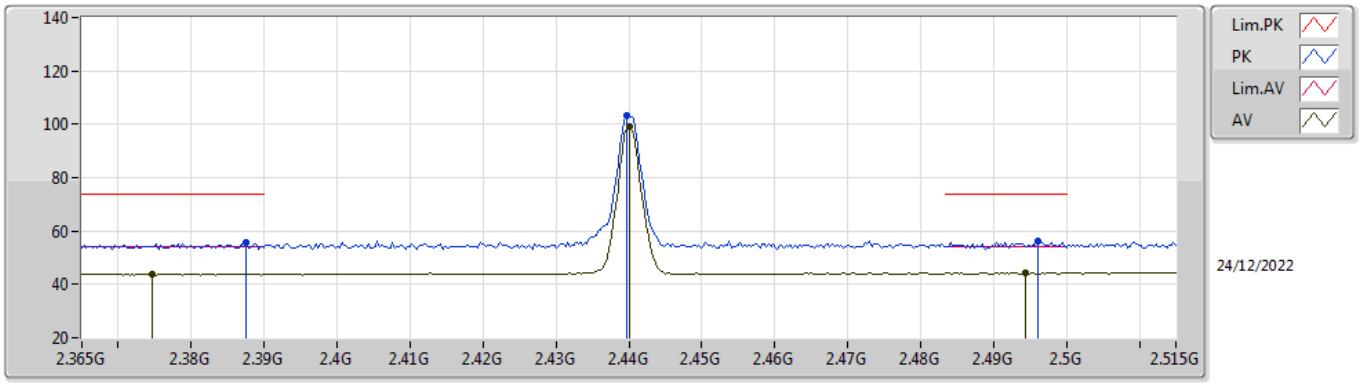



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.80016G | 46.31 | 74.00 | -27.69 | 40.80 | 3 | Horizontal | 235 | 2.90 | - | 32.70 | 5.70 | 32.89 |
| AV | 4.81024G | 33.15 | 54.00 | -20.85 | 27.57 | 3 | Horizontal | 235 | 2.90 | - | 32.76 | 5.71 | 32.89 |

## BT-EDR(3Mbps)

## 2440MHz_TX

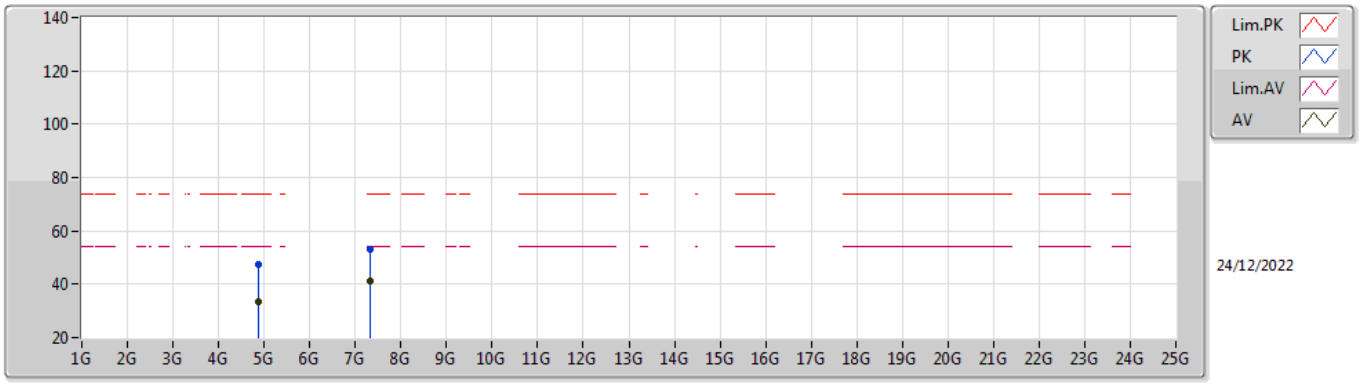



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.3875G | 55.53 | 74.00 | -18.47 | 24.17 | 3 | Horizontal | 7 | 2.26 | - | 27.77 | 3.59 | - |
| AV | 2.3746G | 43.97 | 54.00 | -10.03 | 12.65 | 3 | Horizontal | 7 | 2.26 | - | 27.75 | 3.57 | - |
| PK | 2.4397G | 103.02 | Inf | -Inf | 71.52 | 3 | Horizontal | 7 | 2.26 | - | 27.88 | 3.62 | - |
| AV | 2.44G | 98.88 | Inf | -Inf | 67.38 | 3 | Horizontal | 7 | 2.26 | - | 27.88 | 3.62 | - |
| PK | 2.4961G | 56.13 | 74.00 | -17.87 | 24.30 | 3 | Horizontal | 7 | 2.26 | - | 28.18 | 3.65 | - |
| AV | 2.4943G | 44.27 | 54.00 | -9.73 | 12.45 | 3 | Horizontal | 7 | 2.26 | - | 28.17 | 3.65 | - |

## BT-EDR(3Mbps)

## 2440MHz_TX

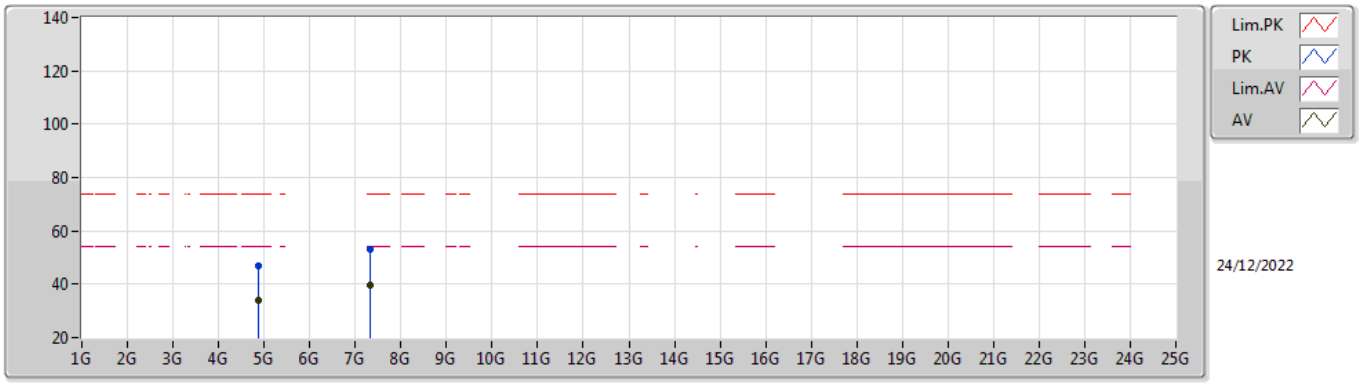



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.87048G | 47.36 | 74.00 | -26.64 | 41.47 | 3 | Vertical | 85 | 2.71 | - | 33.00 | 5.77 | 32.88 |
| AV | 4.88144G | 33.69 | 54.00 | -20.31 | 27.78 | 3 | Vertical | 85 | 2.71 | - | 33.00 | 5.78 | 32.87 |
| PK | 7.32548G | 53.29 | 74.00 | -20.71 | 41.72 | 3 | Vertical | 40 | 1.80 | - | 37.60 | 7.16 | 33.19 |
| AV | 7.31996G | 41.18 | 54.00 | -12.82 | 29.61 | 3 | Vertical | 40 | 1.80 | - | 37.60 | 7.16 | 33.19 |

## BT-EDR(3Mbps)

## 2440MHz_TX

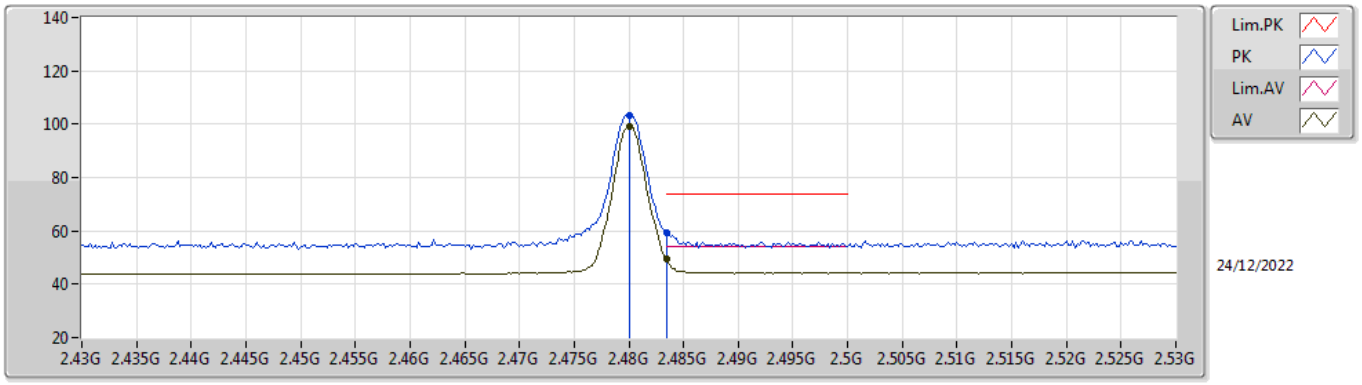



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.88036G | 47.06 | 74.00 | -26.94 | 41.15 | 3 | Horizontal | 127 | 2.69 | - | 33.00 | 5.78 | 32.87 |
| AV | 4.8804G | 33.97 | 54.00 | -20.03 | 28.06 | 3 | Horizontal | 127 | 2.69 | - | 33.00 | 5.78 | 32.87 |
| PK | 7.3126G | 53.07 | 74.00 | -20.93 | 41.49 | 3 | Horizontal | 80 | 1.80 | - | 37.60 | 7.16 | 33.18 |
| AV | 7.32436G | 39.67 | 54.00 | -14.33 | 28.10 | 3 | Horizontal | 80 | 1.80 | - | 37.60 | 7.16 | 33.19 |

## BT-EDR(3Mbps)

## 2480MHz_TX

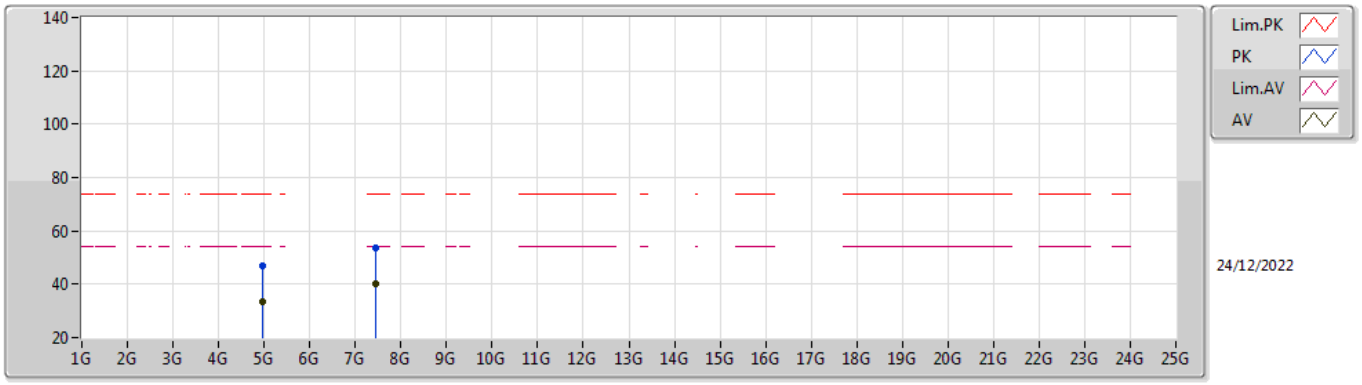



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 2.48G | 103.37 | Inf | -Inf | 71.65 | 3 | Horizontal | 360 | 2.66 | - | 28.08 | 3.64 | - |
| AV | 2.48G | 99.13 | Inf | -Inf | 67.41 | 3 | Horizontal | 360 | 2.66 | - | 28.08 | 3.64 | - |
| PK | 2.4835G | 59.14 | 74.00 | -14.86 | 27.40 | 3 | Horizontal | 360 | 2.66 | - | 28.10 | 3.64 | - |
| AV | 2.4835G | 49.35 | 54.00 | -4.65 | 17.61 | 3 | Horizontal | 360 | 2.66 | - | 28.10 | 3.64 | - |

## BT-EDR(3Mbps)

## 2480MHz_TX

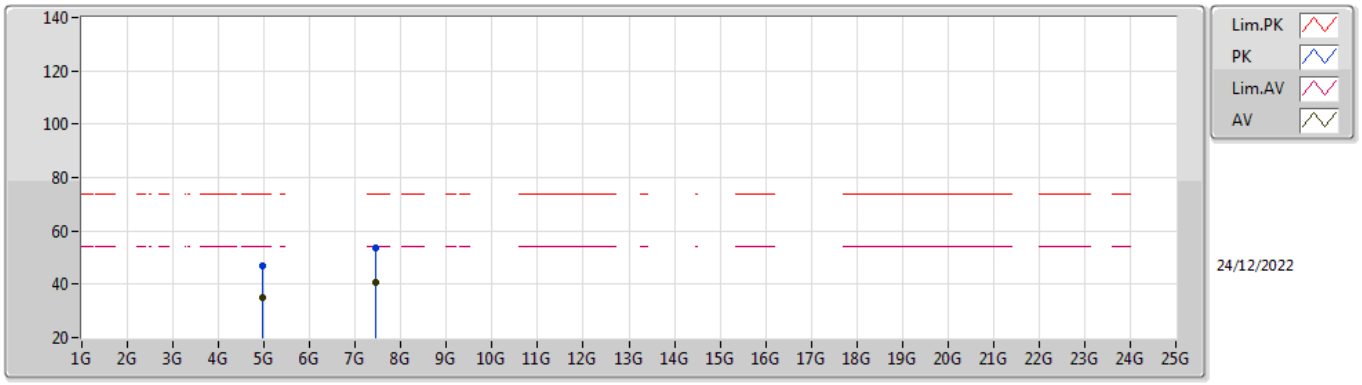



EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.95292G | 46.91 | 74.00 | -27.09 | 40.91 | 3 | Vertical | 297 | 1.58 | - | 33.01 | 5.85 | 32.86 |
| AV | 4.96104G | 33.65 | 54.00 | -20.35 | 27.63 | 3 | Vertical | 297 | 1.58 | - | 33.02 | 5.86 | 32.86 |
| PK | 7.44016G | 53.64 | 74.00 | -20.36 | 42.17 | 3 | Vertical | 258 | 1.59 | - | 37.50 | 7.22 | 33.25 |
| AV | 7.44012G | 40.23 | 54.00 | -13.77 | 28.76 | 3 | Vertical | 258 | 1.59 | - | 37.50 | 7.22 | 33.25 |

## BT-EDR(3Mbps)

## 2480MHz_TX




EUT Z_1TX
Setting 4
01-C-R-6

| Type | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 4.9602G | 46.93 | 74.00 | -27.07 | 40.91 | 3 | Horizontal | 168 | 1.80 | - | 33.02 | 5.86 | 32.86 |
| AV | 4.95996G | 34.85 | 54.00 | -19.15 | 28.83 | 3 | Horizontal | 168 | 1.80 | - | 33.02 | 5.86 | 32.86 |
| PK | 7.43936G | 53.41 | 74.00 | -20.59 | 41.94 | 3 | Horizontal | 279 | 1.51 | - | 37.50 | 7.22 | 33.25 |
| AV | 7.44036G | 40.71 | 54.00 | -13.29 | 29.24 | 3 | Horizontal | 279 | 1.51 | - | 37.50 | 7.22 | 33.25 |